



Universitetet  
i Stavanger

FACULTY OF SCIENCE AND TECHNOLOGY

## MASTER'S THESIS

Study programme/specialisation:  MSc in Offshore Technology (Industrial Asset Management)	Spring semester, 2017  Open/ <del>Confidential</del>
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Programme coordinator:  Supervisor(s): Knut Erik Bang	
Title of master's thesis:  Benchmarking in Procurement Contract to Improve Performance	
Credits (ECTS): 30	
Keywords:  Benchmarking, Procurement contract, Performance measures, Contract lifecycle Framework, Contract management system	Number of pages: 62  + supplemental material/other: 38  Stavanger, 7th June 2017



# MASTER THESIS

Master of Science in Offshore Technology  
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Benchmarking in Procurement Contract to Improve  
Performance

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Spring Semester, 2017

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# Abstract

In recent years, there has been unprecedented interest shown by organisations to adopt the best practices followed by the Industrial leaders. Competition in the Oil & gas market, companies becoming global player and advanced technology have made it difficult for the small and medium sized service providers to sustain in the market. This made them to tighten the expenditures and reduce cost in further investments. This trend changed when the smaller companies turned their focus towards improving efficiencies rather than cost cutting. One such major tool adopted for achieving this objective is Benchmarking.

This thesis tries to identify and solve the problems existing in contracts and how benchmarking can be used in contracts to improve the overall performance of the organisation. Procurement contracts were taken as the main subject. Detailed review of available literature on contracts and major issues experienced in contracts were studied. Market analysis helped in analysing various procurement contracts used by the leading oil and gas companies. Inputs taken from the contractual documents of these companies and the contract management process followed. Thus, by analysing the process and criteria based on which the system is built, a contract lifecycle framework was drafted. The framework is the collection of best practices followed by the Industrial leaders and inputs derived from leading consultancy firms. This framework gives the contract management team an overall picture of the process flow.

Improvements can be made to a system only if there are any measurements made. The evaluation table provides a set of practices associated with the framework, which must be performed by the contract management team. The table gives how a bottom performer and Top performer approaches that particular set of practices. The evaluation does not provide any results or solutions to the existing problems. It provides an insight about the current practice followed in the company and where they stand in terms of quality. Certain Key Performance Indicators associated with the framework is then identified. The formulas are used to calculate the performance measures and are compared against the best practices. Based on the framework and benchmarking criteria, this method is suggested for companies who have a basic contract management system to become more organised. This will improve the overall performance of the organisation.

**Key words:** Benchmarking, Procurement contracts, Performance measures, Contract lifecycle Framework, Contract management system

# Acknowledgement

This Master Thesis could not have been completed without the great support that I have received from so many people over the years. I am so grateful to my parents living in India who had been supporting me throughout my life in all aspects. Their financial support was crucial in enabling me to complete my master degree here in University of Stavanger.

I would like to thank my academic advisor, Professor Knut Erik Bang, for guiding me to this level. I am extremely grateful for his trust and advice. Despite the challenges faced, his motivation pushed me to work more effectively.

Next, I would like to thank Hyundai Engineering and Construction Ltd for giving me an opportunity to work with them and glad that I could help them in the ongoing project. A special mention to Mr. Beom yoon kim, for his technical support during the entire project.

I also thank my friends, fellow graduate students and well-wishers for their inputs and support during this period.

This last word of acknowledgment is for my loving wife Deepthi, who has been with me all these years and has made them the best years of my life. I was amazed by her continuous support and willingness to help me throughout this master thesis. Completing this work would have been more difficult if not for her support

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# Abbreviations

APQC- American Productivity & Quality Center

CEO – Chief Executive Office

FTE- Full Time Employee

HDEC – Hyundai Engineering and Construction Company Limited

INCOTERMS-International Rules for the Interpretation of trade terms

ISO- International Organisation for Standardization

KPI- Key Performance Indicators

KRA- Key Research Areas

RFQ- Request for Quotation

SCM- Supply Chain Management

# **1 Introduction:**

## **1.1 Background:**

Organizations have opted to concentrate on core competencies rather than the age-old policy of “in-house” functionality. The current stage in the evolution of outsourcing is the development of strategic partnerships. Companies have always hired sub-contractors for designated activities. However, the difference between simply supplementing resources by “subcontracting” and actual outsourcing, is that the latter involves substantial restructuring of business activities including, often, the transfer of staff from a host company to a specialist, usually smaller, company with the required core competencies.

When an organisation outsources a service or function, it covers certain key risks. It can be in the form of poor performance by the contractor; unforeseen fees or charges; property damage or data loss, etc., Nevertheless, the responsibility of training the supplier and getting the work done in a proper manner lies with the organisation. To cover such issues, the company should ensure that a robust contract is put in place with the contractor who is being engaged. Contracts are used to give a clear picture to the contractors about the scope of the work and remain mindful of exactly what they've been contracted to do, thus reducing confusion and increasing focus.

Despite having a robust contract, the technological changes taking place in the market makes the contractual agreements and the process associated out-dated in a short period. The pace of change is so rapid today that no single organization can ever control or dominate all effective operating practices and good ideas. To be a marketplace leader, one must look for constant improvement and new ideas. A company can accelerate its own rate of improvement by systematically studying others and by comparing its own operations and performance with the best and most effective practices of highly innovative and successful companies. Benchmarking is therefore a pragmatic approach to managing change and performance improvement. The most effective benchmarking exercises are built on clear, robust and unambiguous benchmarking clauses which are mentioned in the contracts. Contracts require benchmarking of key performance indicators (KPIs) to assure the owner that the services provided are competitive and consistent with industry costs, project time and quality. Contractors on the other hand have to adopt to best practices in order to compete with other suppliers in terms of quality at the same time making the business profitable. The major

challenge is to frame a contract which is free from ambiguities, at the same time focusing on improving the efficiency of the task performed.

## **1.2 Objective:**

In this thesis, we shall analyse the Procurement contract of Hyundai Engineering & construction Ltd, a leading service provider in the Oil & Gas field. The organisation is based in South Korea and has multiple contracts with Suppliers across the world. The aim of the study is to identify the areas of the contract which lacks clarity and how it can be improved by comparing with the industrial leaders. This thesis identifies the key issues & concerns that should be addressed in the lifecycle of a contract, and suggests a framework that can be implemented to increase performance.

## **1.3 Scope and Methodology:**

The standard procurement contract of Hyundai engineering and construction limited is taken for analysis in this thesis. Similar procurement contracts are obtained from other leading oil and gas service providers for comparison and identification of best practices. Based on the information gathered, a framework for the lifecycle of contract execution is developed. The framework can be used as a benchmark to identify the effectiveness of any procurement contract. Industries' best practices on all the key areas identified under the framework are suggested to Hyundai Engineering and construction limited. Finally, a methodology to evaluate the effectiveness of the current contract management processes is suggested.

## **1.4 Delimitations:**

This thesis does not cover the legal aspects associated with the Procurement contract. The Benchmarking criteria are taken by comparing the practices followed by the industry's leading companies, however, does not include all of them. The contracts are also restricted to oil & gas service providers.

## **1.5 Thesis Outline:**

The following structure gives the birds eye view of the thesis and its contents.

Part 2 – Literature Review - contracts, benchmarking, Major issues in the contracts

Part 3- Market research about Companies practising contracts, Issues in executing contracts, cost involved in contracts, etc.,

Part 4- Introduction to Hyundai Engineering and construction Ltd and its supply chain process.

Part 5- Framework, Criteria for creating a framework.

Part 6- Proposal of framework, Analysis of contract & framework

Part 7- Evaluation of HDEC performance after implementation of framework.

Part 8- Conclusion





## **2 Literary Review:**

### **2.1 Contract:**

“A contract is an obligation, such as an accepted offer, between competent parties upon a legal consideration, to do or abstain from doing some act” (D.Gardiner, 2005). A contract, to be legally binding, must show that:

- the two parties clearly intend to contract
- there is a clear offer and an offer acceptance
- availability of two parties who are legally capable of contracting
- A price which is agreed by the buyer to pay the supplier
- Purpose for the purchase which is legal
- Agreement between contracting parties about the terms and conditions

The purpose of a contract is to reduce to a formal agreement the respective responsibilities of the parties in the agreement. The contract must clearly state these responsibilities as they relate to the scope of the work to be performed, deliverables, results, the reporting requirements, the performance monitoring activities and the pricing conditions

### **2.2 Supply chain and Procurement contract:**

A supply chain refers to an integrated and sequentially interrelated value system of suppliers, manufacturers, subcontractors, distributors and retailers working together with the prime purpose of creating value to the output for the ultimate end-users.

Supply chain management (SCM) is the oversight of materials, information, and finances as they move in a process from supplier to manufacturer to wholesaler to retailer to consumer. SCM involves coordinating and integrating these flows both within and among firms so that firms within a supply chain can achieve sustainable competitive advantages through developing much closer relationships with all companies, and they can significantly reduce time and costs depending on the appropriate management of the supply chain, while serving customer needs at the same time.

Most of the projects these days, whether a simple one or a multi-million project have a supply chain department which monitors the procurement activities. They use different types of contracts with the suppliers for the purchase of services and materials. A properly drafted contract can be key to a successful project by establishing the expectations, rights and responsibilities of the owner, contractor and other parties involved in the project. Given the

vital role a good contract can play in a successful construction project, it is important to put in place a contract that meets the needs of the specific project.

### **2.3 Common issues with the Procurement Contract:**

A common mistake companies make in outsourcing today is that the contracts are created focussing on the legal aspects and defining high standards of work. Researchers have identified that the traditional buy-sell contracts do not provide any value addition in this modern era. Contracts must be framed from both the ends viz., purchaser and supplier where the terms & conditions are mutually agreed —binding each party to a win-win approach (Rawlison Butler, 2015). The most common issues in procurement contract are stated below.

#### **2.3.1 Scope of the contract and requirements:**

The mostly commonly arising problem is in understanding the scope of the contract. It is not possible to include 100 % of the requirements in the contract, but it is always a good practice to make the supplier understand what is expected out of him from that contract. The duty of the purchaser is to ensure that the requirements have relevant measure and identify the constraints. Framing high complex contract and including high risk mitigation may lead to failure of contracts.

#### **2.3.2 Roles and responsibilities:**

Supplier needs to understand his roles and responsibilities in the contract. The contractual documents should indicate what has to be performed, when it has to be performed and what will happen if those are not met. Conflicts occur when there is no enough clarity in the contract about the above-mentioned factors. Purchasers include a general clause stating that “it is the responsibility of the supplier to maintain quality at all times”, thereby transferring the risk. However, this does not serve the purpose of the contract and leads to disagreements.

#### **2.3.3 Managing changes and deviations:**

The project specifications and requirements often change due to the changes in design. The engineering department constantly works to improve the efficiency of the system or to tackle external risks. Any changes with the design shall affect the procurement of materials. So, a contract must be equipped with clauses to handle the changes. For long term contracts, a more

detailed process may be required to approve the changes as it may have a consequential impact on the other divisions.

#### **2.3.4 Measuring Performance:**

There is no proper mechanism included in the contractual document to measure the performance of the supplier. A general clause of liquidated damages is mentioned which is levied if the supplier is not meeting the delivery schedule. Suppliers too tend to take shortcuts, deviations to minimize the penalties. They remain non-cooperative in determining their performance in the contract. It is the responsibility of the purchaser to analyse the performance of the supplier, identify key areas where things go wrong or where it can be improved. Proper reports and analysis shall lead to valuable information which can be used for future contracts.

#### **2.3.5 Risks & limitations**

There are risks involved in various stage of the project. Purchaser transfers the entire risk to the supplier during the manufacturing stages until the product is delivered. Warranty terms covers the purchaser to an extended period. However, supplier also uses the risk clauses on the purchaser for the approval delays & documentation delays. So, the relevant factors have to be considered before framing the liability clauses and transfer of risk.

#### **2.3.6 Remedial measures and Alternatives**

Termination is not the only measure for the supplier if things go wrong during the contract execution. Failure to comply the contractual terms or performance failure, the supplier must be given sufficient time to rectify the problems. Clarity about handling the remedial actions must be specified in the contract. This shall act as a check point for both the sides. Alternatives are also essential to the contract, where the factors could not be controlled.

#### **2.3.7 Benchmarking and Innovation:**

Companies are adopting practices followed by the industrial leaders to progress. This helps an organization to accelerate its own rate of improvement by analysing the processes of its competitors, adopt their methods by adding innovation and monitoring its own performance after implementing the new techniques. Benchmarking continues to be a difficult issue for customer and supplier in the outsourcing process, both during contract negotiations and when it comes to implementation. Customer wants its suppliers to follow the best practices, but there

are no specific instructions provided to them in the contract. Suppliers find benchmarking as a hindrance to their work structure and often arising conflicts with the customer. The responsibility lies with the purchaser to identify the areas for improvement, benchmarking targets, providing guidance to the supplier and achieving the targets. Training the supplier to the purchaser needs shall ultimately improve the product quality and reliability.

## **2.4 Benchmarking:**

Benchmarking is a technique in which a company measures its performance against that of best in class companies, determines how those companies achieved their performance levels and uses the information to improve its own performance. Benchmarking is considered as a significant tool of quality improvement in organisations within the context of total quality management (Bogan & English, 1994)

In the early 1980s, Xerox Corporation, a leader in the business process of benchmarking, referred to benchmarking in rather narrow terms that focused primarily on comparisons with one's primary competitors. "Benchmarking is the continuous process of measuring products, services, and practices against the toughest competitors or those companies recognized as industry leaders," as defined by former Xerox CEO David Kearns.

## **2.5 Growth of Benchmarking Technique:**

As the Industrial sectors became more developed and organized, it became clear that large profits could be made by developing better products, and producing goods in ways that were faster and more efficient. However most of the companies lacked the knowledge and skill to compete in the market. The desire to adopt the practices followed by the market leaders and industrial giants was on the rise. (Kozak, 2004)

One such major instance in early days were reverse engineering. Not only did organizations look at the competition and try to improve their products and services, they acquired competitors' products, dismantled them and learned how to equal or if they could, improve on what they learned.

The resurrection of Japanese economy during the 1950's was considered as the turning point in the history of benchmarking. As part of their effort to establish a vibrant manufacturing industry Japanese industrialists visited American factories. This gave them both an insight into American manufacturing practices and an idea to use in their own factories. However, the Japanese did not simply copy what they saw, but understand why it worked and improved on

the practices they discovered before adopting them. At present, The economy of Japan is the third-largest in the world by nominal Gross Domestic Product and second largest developed economy.

## **2.6 Need for Benchmark**

Benchmarking provides the quantitative method by which companies measure functional improvements, operational efficiencies, and cost reduction opportunities. This process serves as an objective measuring stick which is used by companies to make business decisions, develop strategy as well as improve the working systems. Process comparison helps in identifying the existing gaps and provide insight for improving that process. Essentially, benchmarking provides a reference point for implementing and managing change. (BCS Chartered Institute, 2006)

## **2.7 Approaches to Benchmarking:**

There are many approaches towards benchmarking. Organisations follow different techniques and models which suits their requirements (Stapenhurst, 2009). The commonly used benchmarking processes are:

- One-to-one benchmarking- This is the most common and simple method. A company visits another company and understands the process.
- Review benchmarking is an organisation visiting many such organisations and identifying relative strengths/weaknesses, best practices and making recommendations.
- Database benchmarking in which a participant's data are compared to a database of performance levels.
- Survey benchmarking, usually carried out by an Third part consultants or field experts surveying customers the company's strengths and weaknesses compared to the competitors.
- Business Excellence Models benchmarking in which an independent assessor scores aspects of the organization as per the Business Excellence Model such as the Baldrige Award or the European Foundation for Quality Management.

## **2.8 Benchmarking Lifecycle:**

Benchmarking is not a finite process. It is a continuous, evolving cycle with six distinct phases:

- Planning and setting scope and goals
- Gathering the relevant data and information
- Assessing and analysing the data
- Creating an action plan based on the analysis and desired changes
- Executing and implementing the action plan
- Reviewing results and recalibrating metrics based on expected vs. actual results

The process does not end after reviewing and recalibrating, but returns to the planning phase for the next iteration. (Caturano and Company, 2014)

### 3 Market Study

#### 3.1 Companies Practicing Contracts

Productivity is a key term which shows how well the company utilizes its resources to achieve the desired target. Cost and time are inversely proportional, which means lesser time or cost yield increased productivity. Contract productivity is similar to business productivity. Reductions can be made in the life cycle of the contract and can be made more productive viz., dispute resolution, renewal, variations, cost implications, clarity, etc.,

Study shows that the industrial leaders are adhering to the contractual clauses and managing them efficiently thereby making 86% savings. There are certain potential losses and unexpected delays while executing the contract which means even the industrial leaders could not make it 100%. Majority of the organizations receive less than half of the identified savings, the major reason is that they follow 39% of the contracts clauses and compromising the majority part. The companies which makes heavy financial losses are the one who are not compliant with the contracts. (Karumsi, 2011)

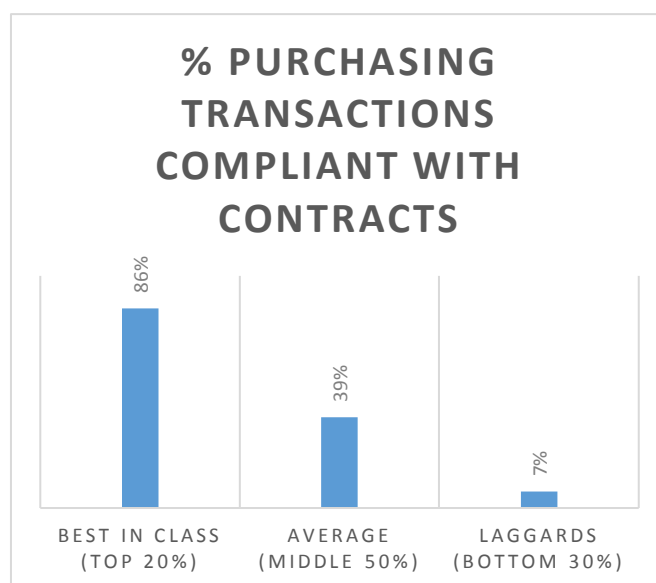


Figure 1: Organisations compliant with contracts

In earlier days, the cost involved in procuring the materials were considered as an overhead cost. Today, the leading organisations view sourcing function as a strategic process aiming at cost savings and improved customer satisfaction. Industrial leaders adopt the measure of calculating the cost involved in a procurement cycle per purchase order to determine the effectiveness of the procurement function.

Study conducted by APQC with a total of 180 multinational companies are given in the below graph. The expenditure made by the Top performers are 5 times less when compared to the

bottom performers. This study emphasizes the importance of looking beyond the actual cost of the product and determining the total cost associated with the entire process. The bottom & median performers can use the benchmark set by the Top performers in achieving better performance. (American Productivity & Quality Center, 2014)

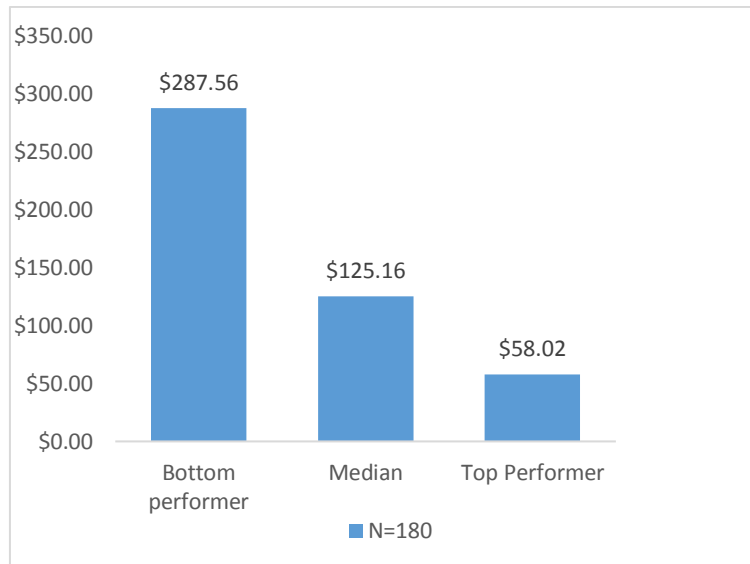


Figure 2: Total Cost of the Procurement Cycle per Purchase Order

Another similar study involving 196 leading organisations to determine the cost of the procurement process in terms of revenue shows that the top performers spend 0.12% of the total revenue whereas the bottom performers spend about 0.61% of their revenue. The measures used to assess the values are average supplier lead time, days payable, supplier appraisal, development cost and transaction amount per purchase order. (American Productivity & Quality Center, 2014)

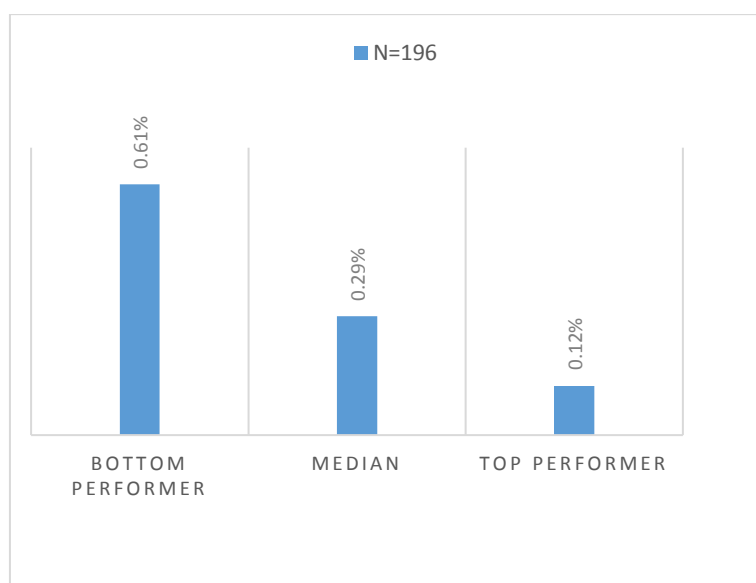


Figure 3: Total cost to perform the procurement process group as a % of revenue



A Centralized system maintaining the contract related activities has become a necessity these days considering the volume of products and number of contracts. Research made by APQC with a sampling strength of 113 leading multinational companies shows the average cost involved. The results show that the total cost of sourcing in a de-centralized system is 1.25 times higher than the centralized systems. (Vitasek, 2012)

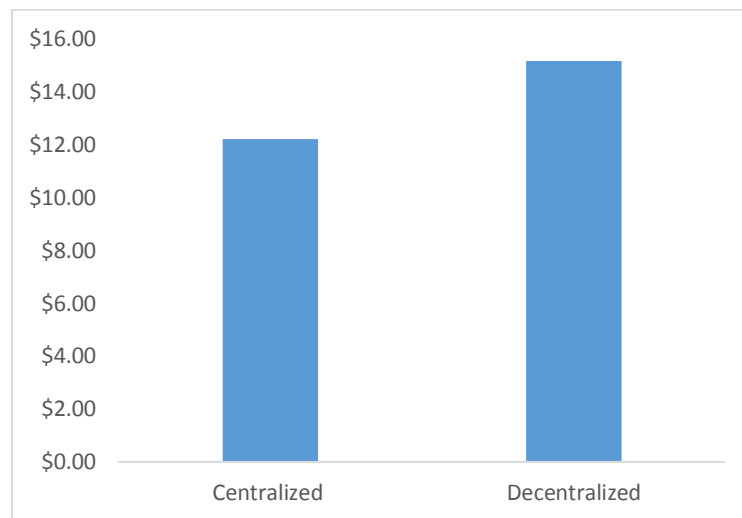


Figure 4: Procurement Cost in Centralized Vs De-centralized system

One of the leading companies in the field of technology is INTEL. They have a fully centralized sourcing system which concentrates on a global procurement and is made up on personnel across the globe. In just two years, this team consolidated 95 percent of the indirect materials buy, which represents a cost reduction of 10 percent.

### 3.2 Common issues in Contract:

There are a few common issues in executing the contracts (Karumsi, 2011). They are:

- Lack of awareness.
- Lack of accessibility.
- Lack of Motivation.
- Lack of Compliance.

#### 3.2.1 Lack of awareness:

A contract involves various stakeholders on both the sides. However, the roles & responsibilities defined in the contract does not reach the bottom level. It remains as a part of

documentation with the project management team. Lack of information leads to processes not adhering to the contract. Study shows that a substantial percentage of stakeholders do not consult the sourcing department while executing the contract. The responsibility also lies with the senior management who does not shows interest in information reaching every stakeholder involved in the project. (Karumsi, 2011)

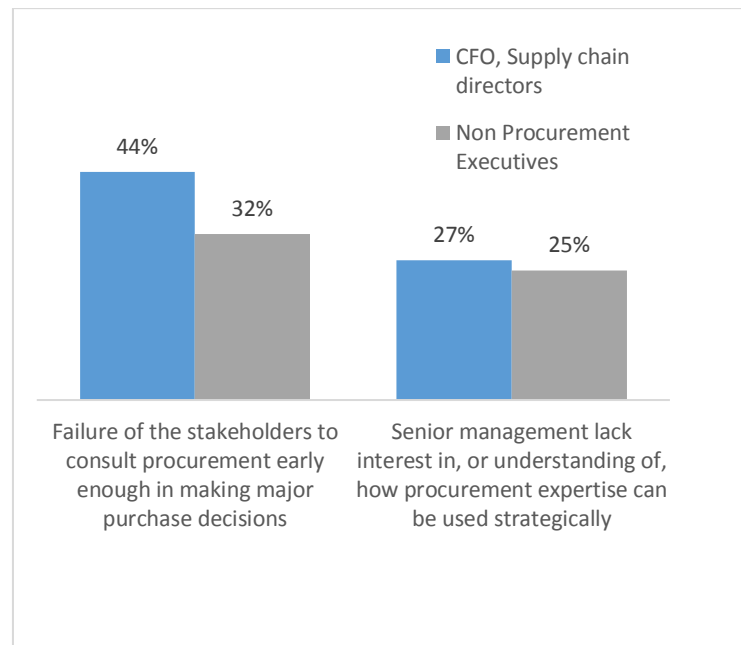


Figure 5: cross-functional engagement during the sourcing cycle

Ensuring sufficient time for contract planning will give opportunity to every stakeholder to know their roles and responsibilities. Middle management must educate the employees involved in the process about the contractual terms. The suppliers support is also very essential in determining the real-time status of the contract.

### 3.2.2 Lack of Accessibility:

Leading companies have a centralized system to manage contract documents where the stakeholders can access the related information anytime. The roles and responsibilities of the stakeholders are also communicated efficiently. They are trained to use the contract management software and any changes made to the contract are readily available online. Studies shows that only 24% of the respondents are using the contract management software. Majority of the companies do not have centralized systems or do not provide access to the project personnel. Specific instructions are only communicated to the stakeholders which means they do not get the overall picture of the contract. 76% of the lot do not use the contract

management software and 13% within tis are not even aware about the software. This leads to reduced effectiveness. (Karumsi, 2011)

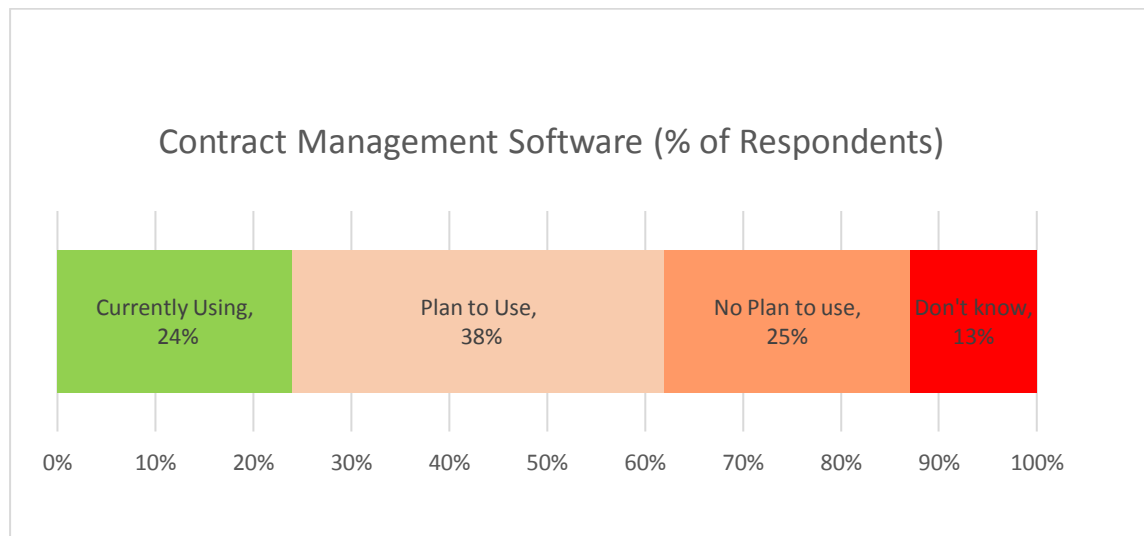


Figure 6: Percentage of Respondents using Contract Management Software

Organisations top management must implement contract lifecycle management softwares and centralized systems, so that everyone is aware about the changes happening in the contract.

**3.2.3 Lack of Motivation:**

Smaller companies tend to procure products without any contracts. They more often tend to do it because of the ease of working they find in doing so. They also do not want to indulge in prolonged documentation work and are interested in current cost-time benefits. Lack of interest shown by the management and not directing their staffs is also a major factor in not using the contracts. (Karumsi, 2011)

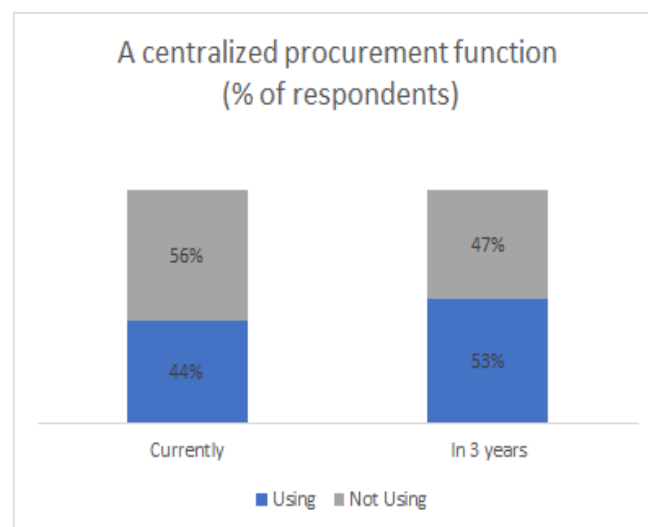


Figure 7: Organisations using Centralized procurement function

It is the responsibility of the management or executive managers to monitor the performance of the contract. Regular performance review meetings shall both the suppliers and purchaser to improve the areas of concerns. Educating the project personnel on the importance of following the contractual obligations shall lead to a collective performance.

#### **3.2.4 Lack of Compliance:**

It has become a common practice to skip certain terms & conditions specified in the contract for the sake of completion of project. This happens in both the sides. There are no proper tools used by the vendor to monitor the real-time execution of the contract. At the same time, the purchasers do not employ performance measures to determine the compliance from the vendor side. Contract management software plays a vital role in determining the real-time status of the contract. The contract management team must enforce proper measures to monitor the compliance at various phases. Transparency and visibility of the contract documents at all levels helps in improving the contract compliance and develop a good supplier-customer relationship. (Karumsi, 2011)

## **4 Hyundai Engineering and Construction Limited:**

### **4.1 A Foreword to Hyundai Engineering and Construction Limited:**

Increasingly, large projects are performed across international borders. This brings with it a need to find contracts that can be applied at an international level. These projects tend to be more complex to manage and their conditions of contract have been developed to facilitate and smooth out the contracting process for all parties.

HDEC was established in 1947 and has been a pioneer in building refineries and other petrochemical plants across the globe. Hyundai E&C is a global Engineering, Procurement and Construction contractor. The primary scope of work of the Hyundai E&C 's Plant Works Division is the planning, engineering, procurement, construction, commissioning, start-up, maintenance and training of process plants (including oil refineries, petrochemical, gas processing plants) and industrial plants (including iron & steel mills and smelters).

HDEC being a multinational company has numerous suppliers across the globe. Various types of contracts are used in a single project depending upon the requirement. This thesis deals with the procurement contracts used by HDEC to acquire piping materials from suppliers for their refinery construction projects.

### **4.2 Contract Awarding and Management Process of HDEC**

The Project team maintains an official supplier lists that are used to request firms to bid on competitive purchases which are not publicly invited. The contractual documents which includes the RFQ's, terms & conditions, commercial obligations, legal clauses are generally sent to the suppliers. In response, suppliers provide a quotation document indicating price and delivery information. Based upon the pricing, deviations, compliance to specifications, negotiations are carried out by the sourcing team. The bid documents are kept simple so that the contract can be awarded quickly after negotiations. Contract is awarded to the successful supplier at the end of negotiations. The formalities of preparing the final contract and getting it authorised by the project personnel shall take considerable amount of time. To prevent these type of administrative delays, HDEC provides the supplier with a letter of intent. This authorises the supplier to carry out the contract from its receipt rather than waiting for the final document to arrive.



Figure 8: HDEC Procurement Process

### 4.3 Initial observations found in current HDEC Procurement Contract

HDEC supply chain department handles numerous contracts on daily basis. Since the projects are carried out in different parts of the world, there are various factor that has to be considered while managing the contract.

**Standard format** - They maintain a standard format for most of the procurement contracts. There are many advantages in using the standard contract terms. Being widely used in the industry, the terms are known to most of the suppliers and well understood. This saves time, cost and man-hours which shall end up in increase efficiency of the project. However, there are issues from the supplier's side stating that the contracts mostly favour HDEC and does not consider the risk factors faced by the vendors.

**Total quality management**- The contract did not give a clear picture about the process control that must be followed by the suppliers at all levels. Procedures for Information regarding the repair, rectification and rejection were not available.

**Contract Monitoring & performance measures**- Expedition and progress reports clauses were present in the contract which indicates the monitoring process. However, there was no reference about the plant visits, random inspection and auditing.

**Document submission procedures-** HDEC has moved to electronic submission of documents through a web portal and discontinued the acceptance by electronic mail. However, the same was not mentioned in the contract. Real-time scenario saw issues with the portals as well.

Detailed analysis of the contract and its shortcoming are discussed in part 6





## 5 Framework to manage Contract Life-cycle

Inputs from HDEC shows that there is lack of resources with the right skills to manage contracts after the contracts have been awarded. The procurement team is having the additional responsibility of managing the contracts. The training provided to the staffs mostly cover the front end of the process (pre-solicitation, selection and contract award). Training on how to manage contracts has been neglected in most organizations. Forming the contract management team is the first step to be taken to manage the contract. Detailed description of creating the contract management team and how the industries' leading companies are utilising the resources is carried out in Section 6.1.3. The next step is to provide the guidelines and standard approach for them to administer the contract.

### 5.1 Need for a framework:

Contract document is the mother document based on which the foundations for contract management are laid. The contractual terms must include the service level, payment methods, delivery schedule, performance measures, communication methods, change control procedures, terminations and other essential clauses pertaining to the project. Contract Management system needs to cover the three main areas, which are:

- Service delivery management
- Supplier relationship management and
- Contract administration. (Office of Government Commerce, United Kingdom, 2002)

Managing these three areas efficiently is the key to success. Apart from this, good preparation and clarity in the documentations are also vital. The purpose of the contract management framework is to provide a clear and standardised approach to managing and administering contracts. The process flow and key points to be taken care in indicated in the framework. This shall give an overall picture to the contract management team about what has to be monitored.

### 5.2 Criteria for Contract life-cycle Framework:

A good practice framework for managing the contract life cycle generally consists of areas including structure/resources, delivery, development, and strategy. These four areas can vary depending upon the type of contract. Any contract management process can be fit into these criteria. Generally, the focus of the framework is on the activities to be undertaken during the operational phase of the contract, i.e. after the contract has been awarded and once the service is up and running. However, organisations have started to include awarding phase of the

contract in the framework as it is a continuous process, with contract management planned for from the start of the procurement process. The above said for areas of a lifecycle can be further classified into the below sub-areas (National Audit Office, United Kingdom, 2016)

### **5.2.1 Structure & resources:**

- Planning and Management - Preparing for contract management and providing overall status to all stakeholders.
- Personnel- Ensuring the right people are in place to carry out the contract management activities
- Administration- Monitoring the contract on a daily basis.

### **5.2.2 Delivery:**

- Relationship Management- Developing strong internal and external relationships among all the stakeholders from both the sides viz., purchaser and supplier.
- Performance Management- Ensuring the service levels are in line with the contract
- Payment terms- Ensuring payments are made to the supplier in line with the contract.
- Risk management.

### **5.2.3 Development:**

- Contract development- Management of change control measures in the contract.
- Supplier development- Improving supplier performance and capability as per the project requirements.

### **5.2.4 Strategy:**

- Supplier relationship management- Having a programme for developing relationships with suppliers
- Market management- Receiving market information and feedback about the products.

## **5.3 Drafting a Framework for HDEC contract lifecycle:**

First, HDEC's supply chain is studied to understand the process flow. Then, there are two major areas which are analysed in detail; the contractual document itself and the existing contract management process. Based on the criteria mentioned in section 5.2, Key Research Areas (KRA's) are identified in Hyundai's procurement process and the contract document. Each key area is tracked and monitored using the key performance indicators (KPIs). Most KPIs have industry set benchmarks and some are company/client set benchmarks. The results can be found by comparing the current process and the best practices followed by leading organisations. The benefits can be intangible, monetary, value addition, process improvement,

quality, etc. The views for these KPIs are approached from both the sides (purchaser and service provider) to minimise one-sided favours. The below framework is constructed considering the required criteria and HDEC's process.



## 6 Proposal: Contract Lifecycle Framework

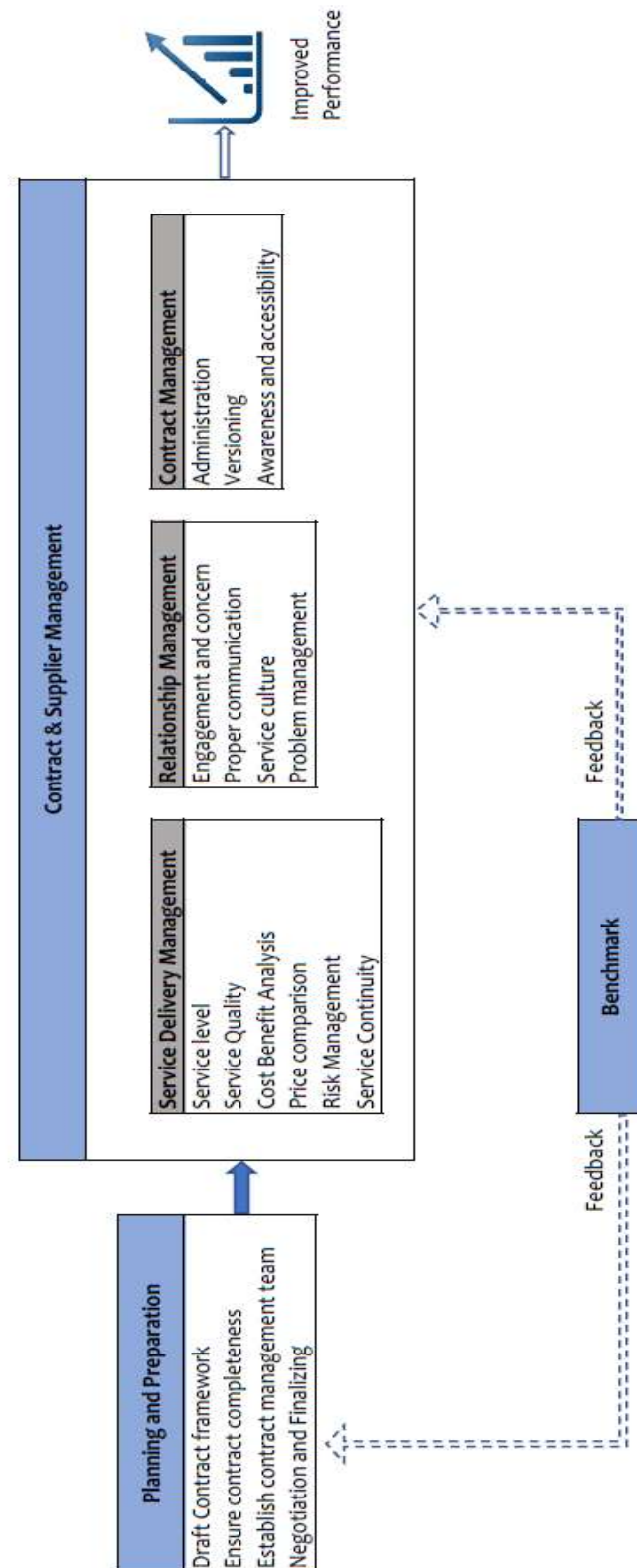


Figure 9: Contract Lifecycle Framework

## **6.1 Planning and preparation:**

### **6.1.1 Draft contract Framework:**

Contract is the base document around which the whole process is constructed. A poor contract leads to unclear scope of work. If the supplier is not clear about the requirements, then the final output will also be poor. Repetitive work and increased cost leads to delay in delivery affecting the performance of the whole project. So, a rightly constructed contract and using it at the right place provides a good framework around which the supplier-purchaser relationship can develop. A detailed analysis of HDEC's procurement contract is made below.

#### **Detailed study of HDEC Procurement contract:**

The Procurement contract consists of 5 major divisions. They are:

- Scope of supply & general conditions: This part of the contract covers the
- Management Conditions
- Financial conditions
- Shipping conditions
- Annexures & Exhibits

#### **Scope of supply and general conditions:**

The first part of the contract contains the entire scope of the project and the general terms and conditions which is agreed during the RFQ (Request for Quotation) stage and later confirmed during negotiations. There are many sub categories under which majority of the terms are explained in detail.

#### **Article 1: Scope of supply**

This section gives a brief introduction to contract indicating the purchase specification, product, technical datasheets and other terms and conditions. The detailed explanations are provided in the annexures or exhibits. In this section, the references towards the attachments are mentioned. For example, The Technical datasheets are provided in the Annexure 1.

#### **Article 2: Definitions and interpretation**

The components of a contract will vary depending on the nature and complexity of the transaction it reflects. There are, however, some terms that may be considered standard that usually appear in documents in contracts in some form or another. It is always a good practice

to explain the contents in writing. There is a difference between the terms the used in common English and in contracts. For example, the term “shall” in a contract corresponds to “must” in common English. The term “may” is used to refer an optional practice r method which corresponds to “shall” in day to day communication.

### **Article 3: Agreement and order of priority**

This section gives the overall view of the contract. There are many documents stating various terms & conditions. HDEC has given its order of priority and in case of any conflicts within the documents, the below order should be followed.

1. Letter of Intent
2. Supply Chain contract
3. Material requisition
4. Subordinate documents of the contract (Specification, datasheets, standards, etc.,)

### **Article 4: Governing law**

Although promises are not necessarily made to be broken, possibility must be considered when drafting a contract. Company shall state the laws of which region or country has to be followed in case of any conflicts or disagreements. Since the company is registered with the republic of Korea, the Korean laws are applicable. However, the project is carried out in United Arab Emirates, so laws of the nation shall be applicable for the work which is done within the geographical area of the country.

### **Article 5: Contract acceptance**

There is a time frame given by the company to the supplier to accept the contract. The contractor can raise any terms or conditions which is conflicting with the previously agreed. The changes can be made and the contract can be amended before final acceptance. After acceptance from the authorised signatories, the contract becomes the mother document and the project is bound by the final contract. In HDEC contracts the time frame given is 10 days and in cases where there are multiple contracts to the same supplier, it is extended to 21 days.

### **Article 6: Delivery schedule**

Delivery schedule section gives a brief indication about the milestone dates for the completion of the project. The detailed description about the list of items, delivery conditions, implication

for failure to deliver the materials within the stipulated time are indicated. The detailed delivery schedule and completion dates for every item are provided in the separate annexure. In certain case, where HDEC is not able to accept the delivery of the goods from the supplier, a reasonable storage charges shall be paid to the supplier after a grace period of 45 days.

#### **Article 7: Title to Goods and Documents**

Title of goods\documents refers to the ownership of the materials. The main purposes of retention of title clauses is during situations where the company is not able to procure the goods or any non-fulfilment of payment terms. Even though the cases are rare, the consequential damage shall be high for the supplier as a huge sum of capital has been invested. In this contract, the conditions mentioned are either receipt of material or receipt of payment by the vendor, whichever is earlier.

#### **Article 8: Transfer of risk of Loss and Custody**

The products shall remain the property of the supplier until it is delivered as per the contractual agreement. Any damages to the products during the phase of manufacturing, testing or shipping becomes the responsibility of the supplier.

#### **Article 9: Liquidated Damages**

At the time of contracting, if the supplier has not achieved the milestone dates then the company can levy liquidated damages. This is one of the methods used to recover a portion of the loss which the company suffers because of the time loss. This clause remains a disputed one in majority of the contracts as there is blame game from both supplier and purchaser in their part of delays. Liquidated damages are nowadays extended to the performance of the product. It is recovered by means of the bank guarantee as well. HDEC levies 1% charges of the contract price for a delay of one week and a maximum of 10%. However, the charges shall be only for the value of the delayed portion of the items. HDEC also levies liquidated damages for documentational delays which is 0.2% per day and can go to a maximum of 3% of the total contract price. In case of material failure of performance issues, the cost for the re-work shall be borne by the supplier and there shall not be any Liquidated damages, provided the schedule is followed.

**Article 10: Non-assignment of credits** This covers legal aspect of the contract.



**Article 11: Changes**

Variations and changes are bound to happen during the execution of the contract. Most of the changes happens with changes in design, which means there might be variations with the products ordered. Additional testing might be requested by the end user even at a latter part. This clause shall cover the terms & conditions pertaining to such kind of circumstances. It also covers the commercial implication, delivery changes, increase in performance, etc. In case of any changes found in the contract which is not a part of the agreement, vendor shall intimate the changes to HDEC within 10 days from the receipt of the contract. HDEC has the right to make changes as per the project requirements and shall make the necessary compensation to vendor.

**Article 12: Force Majeure**

Force majeure clause is generally used in a contract to cover the risk and loss which arises for conditions which is beyond the suppliers/purchasers control. The reasons must be valid and acceptable from both the ends. In case of prolonged delay, both the parties have the right to terminate the contract. HDEC contract covers the below issues.

- a. War and other hostilities, invasion, act of foreign enemies, mobilization, requisition or embargo.
- b. Rebellion, revolution, insurrection, military or usurped power and civil war.
- c. Riot, commotion or disorder, except where solely restricted to employees of the supplier.
- d. Act of god.
- e. Strike organized by labour union, lockout due to strike.

In this contract, a grace period of 4 months is provided to both supplier and HDEC to continue the contract in case of Force majeure. If the situation persists, the contract can be terminated with a notice period of 30 days.

**Article 13: Termination for Vendors default**

This clause refers to the huge delivery delays beyond a period of acceptance, continued failure of products, financial crisis or any other management delays, the purchaser can terminate the contract. HDEC has the right to charge the vendor the delays incurred in the project. However, HDEC shall pay the vendor for the products which has been delivered.

**Article 14: Purchasers right of Termination for convenience**

There are situations where the purchaser fails to abide the contractual agreement because of various reasons. In that case, the contract can be terminated by HDEC and the compensation for the work performed by the supplier will be paid. Normally the cancellation charges are fixed as per the achievement of milestones and in smaller contracts the charges are provided by the supplier. There is also certain guidelines mentioned in the HDEC contract about the steps to be taken by the supplier in case of termination.

**Article 15: Purchasers right to suspension**

The contract can be suspended temporarily or put on hold because of two reasons. The liability lies with HDEC if the contract is suspended for management reasons or financial losses of HDEC. Time is specified and agreed for suspension of contract and beyond that period, compensation shall be paid by HDEC to the concerned suppliers. Most of the HDEC supply chain contract covers a suspension period of 15 days, after which HDEC shall pay for the losses incurred by the vendor. However, if the contract is suspended because of performance issues or any other issues from the vendor's side, the losses must be borne by the supplier.

**Article 16: Sub-contracting**

Suppliers is responsible for the entire contract and under the approval of HDEC certain activities can be sub-contracted. If the supplier is found indulging in unauthorised sub-contracting which threatens the integrity of the contract, HDEC can terminate the contract with a notice period of 7 working days.

**Article 17: Patent and Proprietary rights**

The products manufactured by the suppliers must be free of any issues pertaining to patents. A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing. HDEC transfers the risk or financial loss because of any patent or proprietary rights related to the supplier.

**Article 18: Indemnity**

Indemnity generally refers to the liabilities the suppliers are entitled to pay because of the faulty products or breach of the warranty terms. This is again a clause which deals with the transfer of risk from HDEC to supplier.

**Article 19: Liens**

This clause mostly deals with the issues between the supplier and its sub-contractor. Any dues or payment not made from the supplier to the sub-contractor might affect the delivery of the products, ultimately affecting the contract. During those circumstances, if the supplier does not resolve the issue, HDEC shall withhold the payments to the supplier. The notice period provides by HDEC to the supplier to respond is 15 days.

**Article 20: Secrecy, Confidentiality, Secrecy**

Another important clause is about maintaining the documents provided by HDEC and cannot be circulated without prior approval. Violation of the clause can lead to legal implications. The minimum period for retention of confidential documents is 15 years from the completion of contract.

**Article 21: Consequential damages**

Consequential damages are the losses which are created because of a failure of a product or failure to achieve a milestone. HDEC does not accept or levy any consequential damages.

**Article 22: Non-waiver**

This is another clause which related to legal entities and Risk.

**Article 23: Arbitration**

This is another clause which related to legal entities and Risk.

**Article 24: Spare parts**

Depending upon the project requirements, certain spare parts are procured along with the product. The terms & conditions for the supply of the spares are highlighted in this clause.

**Management Conditions:**

Second part consists of the terms and conditions which are related to the Technical aspects of product. They are also available as a separate document and are discussed during the kick off meeting before the commencement of the project.

**Article 25: Correspondence**

This clause gives the guidelines about mentioning certain details in all the documents which are submitted to the end user for approval. It includes Name of the company, contract reference number, equipment or drawing references, etc. A separate annexure or document is provided by HDEC or explained during the kick-off meeting.

**Article 26: General design obligation**

This clause provides the obligations to be met by the supplier pertaining to the design of the product. HDEC is responsible for the Changes made to the design after the award of contract and any commercial implications can be negotiated. However, the supplier must abide by the specifications/requirements issued by HDEC prior to awarding of contract.

**Article 27: Documentation**

Documentation plays a major part in execution of the contract. This clause refers to the ways and means to handle the documentation by the supplier. Separate annexure is provided explaining the structure, template, format and reference numbers of the documents.

**Article 28: Progress report**

The responsibility of the supplier to provide the documents as listed in the Master document requirements is indicated in this section. It also covers about the vendors plan to carry out the contract, list of sub-contractors, area of work, planned maintenance, holidays, etc., 4 weeks from the receipt of contract is the general time provided to the supplier to provide the project plan. HDEC follows a general practice of verifying the progress of the project by asking its supplier to submit the project status every 20<sup>th</sup> of the month till the delivery of the goods. Apart from the project status report, HDEC also collects details about the major sub-orders, photographic evidences, reports from resident expeditors, delay reports, reasons for delays, etc.,

**Article 29: Scheduling**

This clause refers to the project schedule including the promised dates for each major activity and gives a bird's eye view. The time frame to provide the detailed scheduling is also indicated in this clause. HDEC provides 30 days from the date of receipt of contract to submit the detailed schedule.

**Article 30: Expediting**

Whenever there is scenario of potential delays, HDEC has the right to request the supplier to provide additional resources to the project at no additional cost. HDEC can also inspect the plant and the sub-vendors premises to determine the progress.

**Article 31: Test and Inspection**

Testing and inspection forms an integral part of the contract and technical specifications. Even though detailed ways of testing have been described in the standards, this section gives information about the right to appoint inspectors, carry out in-plant inspections during various stages of the project, issue Hold/witness points during the process, etc. Regarding the basic documentations, Inspection and test plan, advance notices for inspection are also indicated in this section. HDEC requests its supplier to provide an advance of 2 weeks to arrange Third party inspectors or HDEC representatives to witness the activities. HDEC shall confirm to the supplier regarding the witnessing within 5 days after the receipt of the inspection notification. In case of partial shipments, the necessary documentation, material test certificates, inspection clearance note, etc., must be submitted to HDEC within 2 weeks after the completion of work.

**Article 32: Vendor's organisation**

This refers to the access to the vendors premises during the execution of the contract. HDEC can also appoint a resident inspector or an expeditor to monitor the operations and report the actual scenario in the plant.

**Article 33: Warranty**

Warranty terms differs for product and services provided by different suppliers. However, HDEC maintains a standard warranty terms of 12 months from the date of issuance of acceptance certificate. Any additional warranty terms which are project specific can be negotiated any commercial implication can be accepted. During the warranty period, the cost

involved for any performance claims must be borne by the supplier. There are situations where the product has already installed in the system and requires immediate attention. During this period, HDEC has the right to rectify the product and charges the supplier for the process.

**Article 34: Transfer of vendor warranty to company**

If the product fails after installation in the project site, the liabilities are with the supplier even though there is a change in the title of goods.

**Article 35: Technical Cooperation and Joint responsibility**

This clause refers to the technical support required from the supplier side to sort out a problem arising in the project. This has to be accepted between HDEC and the supplier on a case-to-case basis.

**Article 36: Interpretation of trade terms**

Suppliers are aware about the terms which are used in the industry. However, to improve clarity, this clause refers to the type of trade terms used in the contract. Majority of the contracts follow INCOTERMS (International Rules for the Interpretation of trade terms)

**Financial conditions:**

Next part deals with the commercial terms & conditions.

**Article 37: Contract Price**

This clause deals with the commercial terms & conditions associated with the products and services. Separate Annexure is provided to indicate the cost of the items. HDEC maintains a strict code about costs to be fixed and shall not entertain escalation under any circumstances. It also indicates to include costs pertaining to any additional services, packing and shipping as agreed in the INCOTERMS.

**Article 38: Taxes and Duties**

Generally, the taxes and duties of the country of origin must be borne by the supplier. Majority of the HDEC contracts operates as per the INCOTERMS. Some countries/regions provide duty exemption to HDEC and it requests its suppliers to prepare the shipping documentation accordingly.

**Article 39: Terms of Payment and Invoicing**

Payment terms are mutually agreed during the negotiation stages and shall also include Bank guarantees, advance payments, milestone payments, etc. Detailed description is provided in the Annexures.

**Article 40: Bank Guarantees**

Bank guarantees are contract specific and depends upon the value of the contract. This clause deals with the format of the document and the conditions. HDEC maintains unconditional/irrevocable Performance bank guarantees and covers 10% of the contract value. The validity of the bank guarantee is until the warranty period with additional one month grace period.

**Shipping Conditions:****Article 41: Packing and Marking**

Shipping and packing instruction are clearly explained in the Annexures and Project specifications. This section deals with the responsibility of the vendor and precautions to be taken covering the law of the country of origin and country of destination.

**Article 42: Instructions and Documents for shipping**

Information regarding the consignee, shipping address, shipping documents, format for the invoices & packing list, documents required for local transportation and methods are clearly indicated.

**6.1.2 Ensure Contract Completeness:**

Industries leading companies such as Shell, BP, Chevron, General Electric spend a lot of resources for contract management. These organizations maintain high standards for contracts and have an efficient contract management system in place. Detailed analysis is performed on the Supply chain contracts of these companies and the findings are provided below. Addition of these clauses shall improve the clarity in the contract for HDEC.

**Article 1: Drawings and Verification Ownership**

Drawings are the basic and integral part of any product. This clause includes the details regarding the submission of drawings from the supplier to the purchaser, allowable time frames for submission & approval, verifying authority, format of submission, etc.,

**Article 2: Rejection**

Since the products use in the oil and gas industry requires high standard of compliance to specifications, any failure to such standards will result in rejection of materials. The product may not fail; however stricter policies are maintained to check the integrity of the product. This clause will cover the risks of HDEC and makes the supplier more responsible.

**Article 3: Insurance**

Insurance covers the accidental damages to the products and the processes. The suppliers are given the option of insuring the products against its performance. There are other types of insurances which the supplier must cover as per the laws and jurisdictions of the area. The suppliers shall also ensure that their sub-contractors also comply with the insurance requirements pertaining to the product or contract.

**Article 4: Code of conduct**

This clause covers the professional ethics that must be followed during the execution of the contract. It includes the Purchasers integrity guide which deals with the activities related to Illegal payments, gifts or gratuities, anything of value, directly or indirectly, to any person for improperly inducing a decision, etc.

**Article 5: Electronic Commerce**

Since the companies are operating in different geographical locations, it is time-consuming to get the records manually signed and modified. Variations occurs throughout the execution of the contract and these changes are often confirmed by sending electronic messages. This clause provides the necessary confirmation that E-mails can be used as a temporary document to go ahead with the changes until the contract is revised officially.



**Article 6: Right to Audit**

This clause covers the right of the purchaser to conduct an audit on the supplier and covers the period after the completion of the contract also. This ensures that the data and information are kept confidential as per the contract. The cost occurred for the audit is borne by the purchaser and pays the supplier for the man-hours utilized from their side. Audit is also done during the execution of the contract to ensure that the contractual agreements are followed. Sub-contractors are also audited wherever applicable.

**Article 7: Acceptance of Goods**

This clause is used to give a clarity to the supplier about the criteria for the acceptance of the goods from the supplier. It states about the receipt of goods, conditions of the goods, documentations supporting the purchase requirements met (drawings, material certificates, inspection reports, etc.). Once the purchaser is satisfied with the product and documents, a written confirmation is provided to the supplier after which the product is termed as Accepted. This clause forms the basis for the “Title of Goods and Ownership”. Any fault or non-conformity shall be dealt with the rejection clause.

**Article 8: Registrations, Approvals, Authorisations**

The sub-contractors of the suppliers are equally responsible for the quality of the product. Any delays occurring at their premises shall affect the functioning of the project. This clause states the responsibilities of the sub-contractors in following the statutory registrations, approvals, authorisations required to perform the works, any licences, permits and registrations required by government authorities. Requirement of project personnel’s and appropriate certifications required by the technicians is also stated. Any non-compliance shall be dealt with the suspension or termination clause.

**Article 9: Personnel**

This clause deals with the expertise required by the project personnel to carry out the contract. The contractor is responsible for managing the employees and supervising the job performed by them. Certain testing or approvals must be provided by authorised persons who hold valid certifications.

### Article 10: Traceability

Upon written request by the purchaser, the supplier shall furnish information necessary to identify the origin of the goods including place and date of manufacture, components, quality controls, the serial or batch numbers related to the product.

### Article 11: Review meetings

Contract review meetings are essential to discuss any proposed changes to the scope of the contract or any ongoing disputes. It shall help in solving the issues in the early stages and promote a better relationship between the supplier and the purchaser. The intervals between the review meetings are mutually agreed during the beginning of the contract.

#### 6.1.3 Establish Contract Management team:

HDEC does not have a separate contract management team. Procurement, expedition, contract administration and other monitoring processes are carried out by single supply chain department. Also, the supply chain personnel are monitoring multiple projects across various locations. Coordination is carried out from the headquarters located in south korea, which means there are different time zones as well. Even the mail responses shall be delayed because of the geography.

Management is responsible for allocating suitable resources with adequate knowledge and skills. This will result in smooth functioning of the supply chain. A recent study has been made by APQC in determining the allocation of resources in different phases of the supply chain. The top performers are utilising 23.8% of the work force to develop and maintain contracts. The majority is still in the front end of the supply chain. This is again a benchmark which can be used by the organisations in allocating the workforce. (Partida, 2016) & (Tillman, 2017)

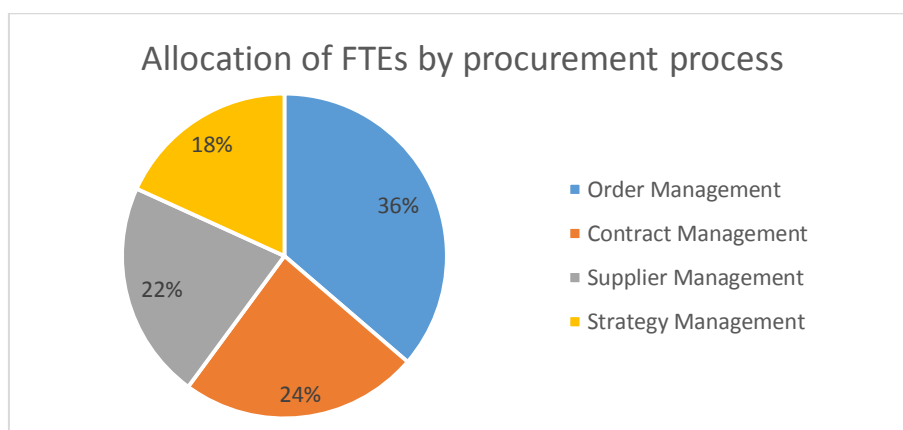


Figure 10: Percentage Allocation of FTEs by Procurement Process

The focus of the contract management team is not only ensuring the contractual clauses are followed, but to focus on achieving the project goals and objectives. The contract management personnel should have business knowledge at the same time adequate technical skills. The contract management personnel are required at all three levels viz., Operational, supervisory and Decision making. The senior management of the company is responsible for allocating the right people to handle various aspects of the contract. Senior management should also ensure that the contracts have clearly defined deliverables, performance measures, benchmarks, which the contract manager can review and report. The operations team is formed by the contract manager and are given specific tasks.

A contract manager has the direct responsibility of project execution and contract administration. He acts as the focal point between various departments and the management. There are certain key qualities/responsibilities for the contract managers (D.Gardiner, 2005). They are:

- Adequately skilled or trained
- Act with due care and diligence, adhering to the legal and accounting requirements.
- Ensure that the contractual terms are followed at all stages and seek remedial action for non-conformities.
- Monitor contractor performance against contract obligations
- Review the contract management process and plan periodically.
- Maintain proper documentations and report to the senior management on the progress of the contract.
- Guide the contract management team and reviewing the tasks allocated to them.

#### **6.1.4 Negotiate and Finalize:**

Once the contract is reviewed by the supplier, the accepted copy must be submitted within the stipulated time as mentioned in the contract. However, if the supplier identifies any clauses which has not been agreed during the offer stages, the same can be communicated to the purchaser for modification. Then the final contract is accepted from both the sides and put into effect.

Industries leading companies are identifying the grey areas where there is a possibility for the supplier to interpret the contract in a different way. More often a Kick-off meeting is organised with the suppliers, representatives from commercial & technical departments where a detailed

contract review is made. The key to success is involving people instead of just reviewing documentation.

## **6.2 Contract and Supplier Management:**

Once the contract is finalized, the next major step is to execute the contract. It includes

- Service delivery Management
- Relationship Management
- Contract Management

### **6.2.1 Service delivery management:**

A service divisions' basic role is to ensure that the terms of contract are followed during the period of project. Service department is also responsible for providing a quality service at a right cost. It also checks the value for money, risk mitigation and back up plans for any service failure. The following sections are covered under the service delivery requirements.

#### **6.2.1.1 Service levels:**

The contract must clearly state the purchaser's requirements and expectations of how the service should be delivered. In some contracts, there are standards and statutory regulations governing the service levels. They should be clearly stated by the purchaser well in advance. It should also state mutual and individual responsibilities. Failure to achieve the service levels shall result in compensation to the either party, which should also be agreed during the negotiation stages. Industrial leaders also offer additional compensation or special recognition to suppliers who have exceeded the service commitments. This is a strategy adopted by leading companies to maintain a long-term relationship.

Flexibility is another area to be focussed while fixing the service levels. Suppliers try to take short cuts if the contracts are strict and one-sided. The quality requirements should also be realistic and in accordance with the available technology, capability and cost.

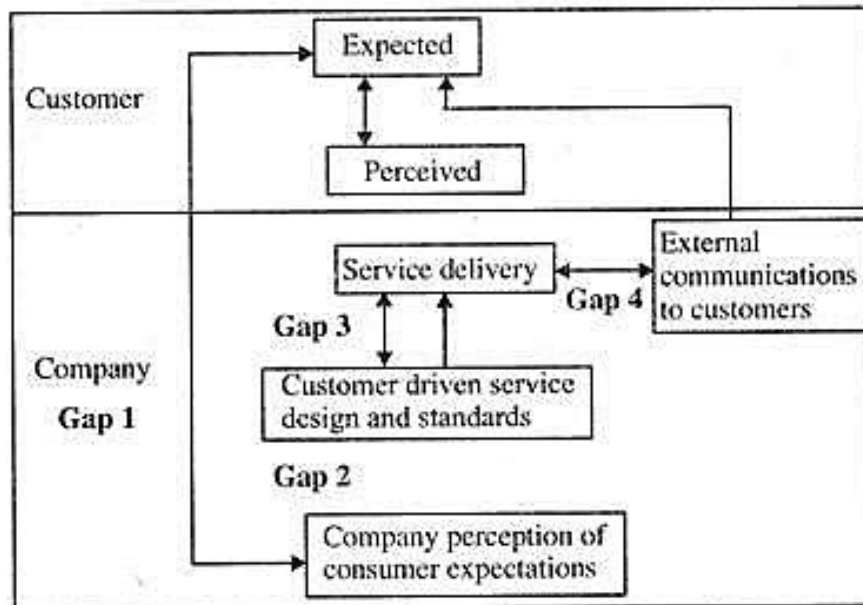


Figure 11: Model of Service quality gaps

### 6.2.1.2 Service quality:

The contract management teams' responsibility does not end with only monitoring whether the service levels are being achieved as agreed in the contract. The quality of the service being delivered must also be assessed. Purchase specifications shall clearly indicate the standards that ought to be followed. However, quality metrics are the measures which clearly gives the performance of the supplier for the ongoing contract. The criteria based on which the performance is determined includes completion of contract, reliability, number of violations, standards, accuracy, flexibility, innovation, best practices, etc.,

Performance Measurements can be made in many ways and the most commonly used methods are: (Office of Government Commerce, United Kingdom, 2002)

**Binary Assessment** – The assessment is made against the standards agreed in the contract. The result shows satisfactory/unsatisfactory; adequate/inadequate; achieved/needs improvements, etc.,

**Calculations and Numerical methods** – Certain quality aspects can be measured and calculated. For example, delivery compliance, number of non-conformities, accuracy, failures, etc. The metrics can be created using the formulas and the output is compared against the acceptance criteria. The frequency for determining the performance must be set depending upon the duration of the contract. The reports generated based on the performance measures

provide vital information about the success of the contract. Remedial actions shall be taken of the value fall beyond the acceptance limits.

**Subjective assessment-** Some of the services cannot be quantified, for example workforce qualities, innovation, problem solving, etc. Even though mathematical techniques could not be used to measure these factors, it is essential to determine the performance by gathering as much as information possible.

#### **6.2.1.3 Cost benefit Analysis:**

Ensuring value for money is about the trade-off between service quality and cost. The reports generated from the quality metrics shows the performance of the project. The key take away from these reports is to determine whether the money spent on the project is worth or not.

Value for money comes from using resources effectively, efficiently and economically.

- Effectiveness is the extent to which objectives are achieved.
- Efficiency is a comparison between optimum productivity and what has been achieved against it using the available resources.
- Economy is concerned with the monetary benefits obtained from executing the contract. It also takes into consideration the value for money instead of only calculating the balance sheets.

Value/cost ratio is a measure which can be used to both quantifiable and subjective assessment. Getting value for money means optimising the ratio between value and cost. It is also important to track actual benefits achieved and costs against what was planned, to ensure that the right level of resource has been assigned to a service.

Every contract should contain mechanisms for measuring the supplier's performance and determining the overall benefits achieved. Developing a benefits statement enables both parties to see the extent to which the overall results can be achieved against what has been achieved.

#### **6.2.1.4 Benchmarking:**

Following the Industries best practices to improve the performance of the process is a growing trend among organisations. The process of learning by making comparisons. The advantages of benchmarking include improvement in processes, obtaining value for money, risk mitigations, improving the supply chain, monetary benefits, etc., Organisations also train their sub-contractors on benchmarking. The ability to measure, monitor, assess, and track KPIs is

critical to any organization's ability to manage its service operations. The comparison is made using performance metrics and the values reveals how the Industrial leaders distinguish themselves from the other organisations. Leading organisations monitor their service performance regularly using tracking systems.

### 6.2.1.5 Risk Management:

Risk management incorporates all the activities required to identify, control and manage risks that might have a negative impact on the contract. Generally, the risks originate from the supplier's side when they are unable to deliver what was promised. It involves cost, time and quality. Contract must define the scope of risk and its consequences clearly. In most of the contracts, the risk is transferred to the supplier until the acceptance of goods. However, it is still the responsibility of the purchaser to monitor the process and manage risks. Any failure or non-compliance from the supplier are subject to financial pressure, at the same time purchaser is also affected because of the lost time.

A simple risk analysis model modified based on HDEC's procurement process and the results are tabulated in the below.

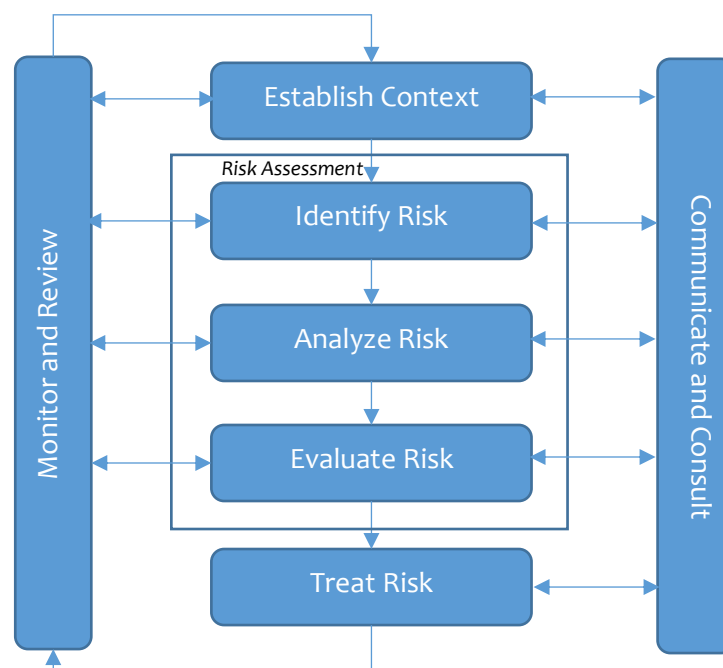


Figure 12: ISO 31000:2009 Risk Management Principles and Guidelines

ISO 31000:2009 provides a proven, robust and reliable approach to managing risk. Organisations have started to adopt this approach to design their risk management process. (Lark, 2015)

**6.2.1.6 Service continuity:**

HDEC has a basic cover for unforeseen events leading to service failure or interruptions. Contract includes a detailed clause regarding Force majeure, termination and service continuity. However, there are no contingency plans or risk overcoming measures to handle situations. The contract management team must perform the cost estimations for the remedial actions. However, the continuity of the business that depends on the service should be a jointly handled responsibility, agreed through liaison between customer and provider.

The below flowchart is one of the best practices followed in the oil and gas sector for crisis Management.

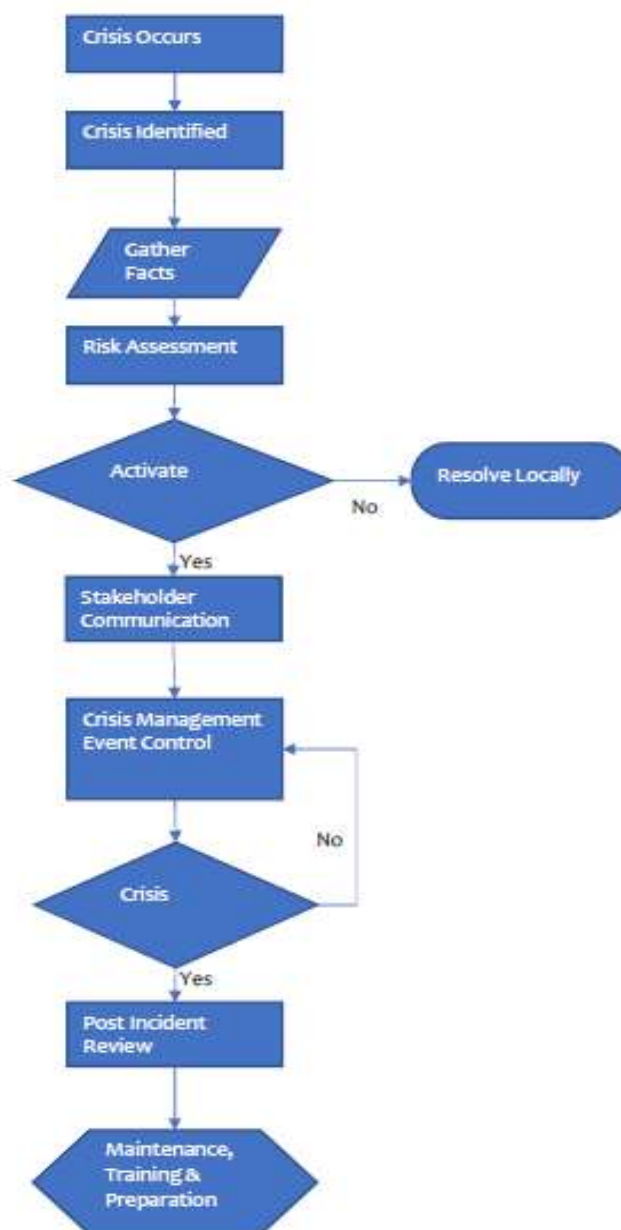


Figure 13: Crisis Management Flowchart



## 6.2.2 Relationship Management:

### 6.2.2.1 Engagement and concern:

Industries leading companies have started to move towards partner based relationship with the suppliers rather than following the traditional power-based approach. A good relationship begins with mutual trust and belief in others work. Purchaser and supplier must work in tandem to achieve a long-term relationship which is beneficial for both the organisations. Delays and problems occur in most of the contracts because of some unforeseen events. It is therefore the responsibility of the purchaser to support the supplier and ensure a joint approach is carried out to solve the issues. On the other hand, if there is a mistake from the supplier's end, there should be an open communication to the purchaser to keep them updated. (Cullen, 2015)

Orientation	Power Based	Partnership Based
Communication	Coercive and secretive	Collaborative and open
Conflict	Blaming and manipulating	Sharing and learning
Relationship	Short term gain	Long term investment
Strategy	Getting more for less	Quality, Service, Fairness
Values	Independence, Self interest	Independence, Mutual Benefit

Table 1: Power-Based Vs Partner-Based Organisations

### 6.2.2.2 Proper Communication:

Effective communication is essential in developing a good relationship between the organisation and suppliers. Leading companies follow the below communication strategy:

- Training the supplier with organization's standards of conduct, policies and procedures.
- Discussing the expected levels of services and performance measures.
- Frequent Interaction between key personnel from both the sides.
- Arranging Performance meetings

Another aspect in effective communication is to identify the executive's level of interest and the position in the supply chain. The required information must reach the right person and at the right time. This forms the basis for decision making. For example, a CEO of a company holds a powerful position in the supply chain, however he may not be interested about the technical aspects of the product. At the same time, a logistics coordinator is not interested in knowing about the companies' financial strategy. The below matrix shall explain this concept.

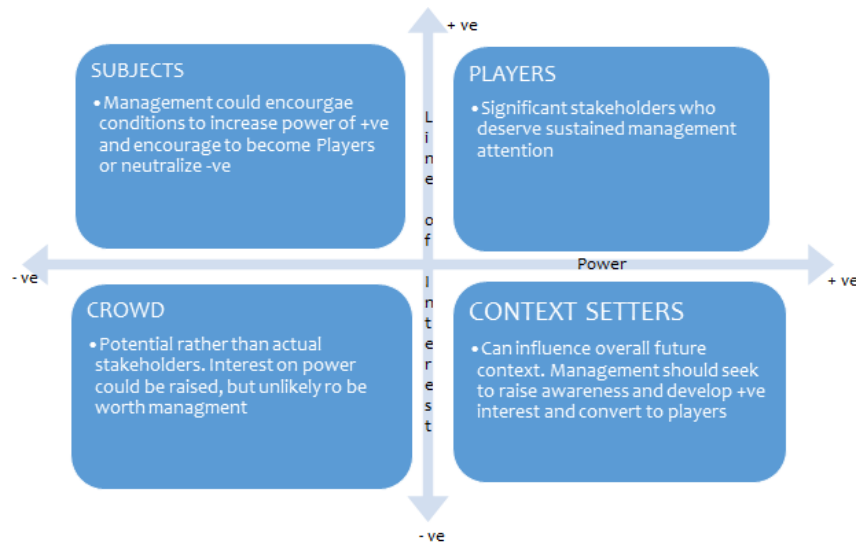


Figure 14: Stakeholder Analysis Matrix

**6.2.2.3 Service culture:**

Organisations started to focus on training the employees to improve the thinking and behaviours. Adoption of this process improved the individual performance of the employee, thereby contributing to the overall performance of the project. They started an integrated approach which involves the employees from senior level to junior most.

- Top leaders must exemplify commitment towards work
- Valuing the employees so they can value the job
- Educating and training the personnel on work culture, behaviour, benefits, etc.
- Monitor level of employee satisfaction

The below flow diagram illustrates the importance of service culture and how it affects the organisations performance (Miller, 2014)

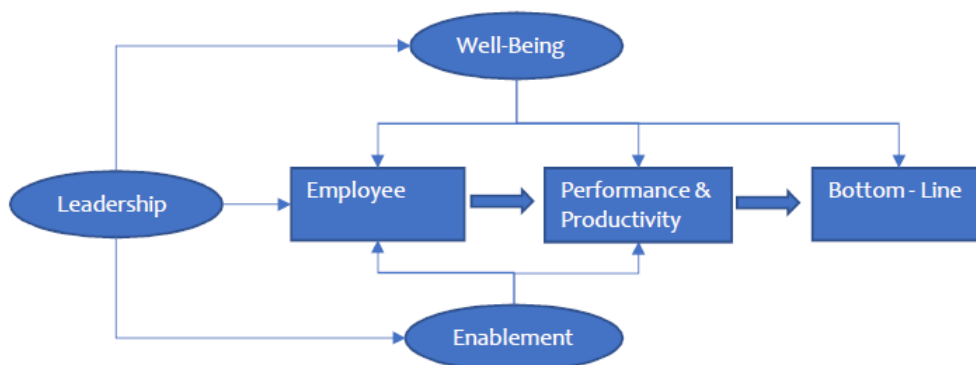


Figure 15: Organisation Service culture

#### **6.2.2.4 Problem Management:**

Contract is only a bidding document indicating how the project should be carried forward. Despite all the efforts from stakeholders, problems arise during the execution phase. The key is to identify how to solve the problems, appoint decision making personnel and document the remedial actions to be taken. The contract must define the procedures for undertaking corrective/preventive action. These actions must be made available to the project personnel at all levels. Apart from performance, there are commercial and administrative issues. Not all the problems can be solved in operations levels, so it is essential to have a clear picture of the organisation chart. The contract management team has the responsibility to escalate the issue to the person who can make the decision quickly. The contract manager from both the sides must arrange weekly/monthly meeting to discuss these kinds of issues. The time or frequency of the meeting must be specified in the contract.

#### **6.2.3 Contract Management:**

Contract management involves ways and means to successfully execute the contract. Changes are bound to happen during the project stages and flexibility is required from both the parties to adapt accordingly. The contract management team is only an entity to overlook the functioning of the contract but the responsibility lies with every individual associated with the contract.

##### **6.2.3.1 Administration:**

The general administration of the execution of the contract is done at operation and business levels. The top management does a random update check to ensure that the functioning is smooth. Contract management teams ensure that the contractual terms are followed in all aspect. Any non-conformity must be reported to the designated authorities. Contingency plans are already included in the contract in case the supplier is not able to comply with the requirements. Commercial conditions and payments have also to be monitored properly.

Organisations are moving from traditional structure to a diamond-shaped structures which involves supplier and Third party service providers. In the diamond structure, the middle managers are replaced with Subject matter experts and project leads. Most importantly, quality assurance and contract management is given priority. Including suppliers and Third part experts helps in managing the contract in a better way. (Cullen, 2015)

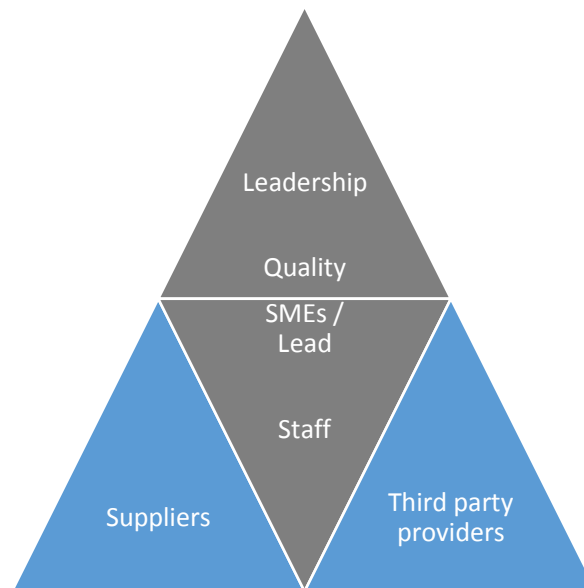


Figure 16: Diamond-shaped Organisation Structure

### 6.2.3.2 Versioning:

The revised documents containing any changes to the scope of the contract has to be made available immediately to all stakeholders in supplier and purchaser side. Process monitoring is very important as the activities are scheduled for a long term.

### 6.2.3.3 Awareness and Accessibility:

The changes happening during the execution of the contract are agreed at the higher levels and documented properly. However, the issues arise when it is not communicated to the stakeholders. The responsibility has to be with the suppliers to ensure that all project personnel have access to the revised contractual documents. Purchasers can ask the suppliers to implement a centralized system as a part of a large or long-term contract.

## 6.3 Benchmarking

Care is taken by the contract management team to ensure the contract terms are in complete compliance. There is always a feedback study made by the contract department to identify the errors and at the same time analyse the areas where the supplier has exceeded expectations. The remedial actions taken by the suppliers are further analysed and documented. This can be used for future projects. The results are shared with the suppliers and the main aim is to work together to improve quality, performance and value for money. Benchmarking is one of the main tools used by growing companies to monitor their performance against current market

conditions. Along with the internal feedback, information regarding the best practices in the industries is also considered for improvements.

The benchmarks related to the framework and contracts are identified. They have been mentioned in evaluation table and key performance indicators table in section 7



## 7 Discussion

### 7.1 Methodology to evaluate HDEC performance after implementation of proposed framework

HDEC has established some basic contract management processes, but have not been extensively used in projects. Implementation of the framework shall help HDEC in improving the current process, however achieving the best practices needs longer time. Only after implementing a concrete contract management system, the pros and cons can be analysed. I have also proposed a short method to evaluate the effectiveness of the framework. The evaluation does not provide any results or solutions to the existing problems. Instead, this methodology will assist HDEC to formulate a contract management plan in areas that may need further strengthening. For example, assessment is made on how the documents are stored and maintained. If the results show that majority of the documents are stored in individual systems and can be accessed only the business units, then the overall performance may be low. On the other hand, if there is a centralized system in operation, then the performance shall be high. Finally, it is up to Hyundai Engineering to further customize and refine the framework and to take necessary action to improve critical processes.

<b>Evaluation Point</b>	<b>Bottom Performer</b>	<b>Top performer</b>
<b>Planning &amp; Preparation</b>		
Does the contract include the entire scope, project requirements, purchase standards and statutory obligations	Basic contract with basic terms & conditions	Detailed contract including all the terms & conditions governing the project. Scope and requirements, Agreed levels of service, Performance measures, Commercial conditions, delivery schedules, Risk measures, ownership of assets, Dispute resolution, Change control measures, communication, etc..
Is the contract reviewed against the Industry standard best practices?	Contract is not reviewed/updated	Periodic review and updating the contract

Evaluation Point	Bottom Performer	Top performer
Is there a contract management team	No contract management team	Organisations are moving from traditional structure to a diamond-shaped structures which involves supplier and Third party service providers. In the diamond structure, the middle managers are replaced with Subject matter experts and project leads.
How changes are managed in the contract	No proper communication channel or E-mail confirmations	Organising Contract review with supplier, Kick-off meetings and Scheduled meeting to monitor progress
<b>Service level Management</b>		
Are the service levels specified clearly	Not mentioned. The service levels are defined by the suppliers	Purchasing standards and statutory requirements are clearly specified. Flexible approach is carried out in defining the realistic quality requirements
Measurement of Service quality performance	No measures defined. Basic verification of compliance against the contractual terms	Performance measures includes completion of contract, reliability, number of violations, standards, accuracy, flexibility, innovation, best practices, etc.
Is there an assessment made on the cost-benefit analysis	Only the procurement cost of the product is calculated	Placing appropriate methods to determine supplier performance, Analysing value/cost ratio and tracking actual benefits received
Are the prices compared with the current market trend	Prices are compared on case to case basis	Adoption of benchmarking methodologies
How are risks managed in the contracts	Risk is transferred to the suppliers	Risk is shared between the suppliers and purchaser. Alternate measures are identified with the help of financial analysis
Is there any contingency plans	No risk analysis and back up plans	Service continuity is given due importance and contingency plans are made in case of unexpected events



Evaluation Point	Bottom Performer	Top performer
<b>Relationship management</b>		
Awareness of contract management process among the stakeholders	Personnel who are directly involved in Sourcing understand the process	Almost all the key stakeholders from various departments such as Sourcing, Operations, Logistics, Quality, Finance, Marketing are involved in contract management
Support and Guidance from the senior Management in contract compliance	Little or no communication on the importance of contract compliance from Senior Management	Management takes the responsibility regarding contract compliance. Periodic review is carried out and progress reports are circulated within the departments. Train and Educate the personnel on the importance of contract compliance.
Tackling Problems arising during the contract period	Decision making is delayed. Actions are taken only after occurrence of event	Contract manager takes the responsibility. Discussion with all stakeholders to find out an amicable solution.
<b>Contract Management</b>		
Is the administration team efficient	Lack of training, skills and knowledge. Inadequate surveillance and monitoring techniques	Trained and skilled employees monitor the contract.
Do current tools and technology enable process monitoring?	Contract compliance reports are not prepared by the contract management team. Random inspection is carried out as a monitoring activity	Integrated software providing real-time project status to all stakeholders as well as ability to flag any non-contracted expenditure
How changes in contract are updated?	Oral/mail confirmations are made to the suppliers indicating changes. No revision is made in the actual document	Changes are highlighted in the revised contract. After updating the contract, the centralized system generates an automated mail to all the stakeholders.
<b>Feedback</b>		
How often the contract is reviewed to adopt best practices	Never/rarely	Periodic review and analysis. The findings are discussed with the senior management for further approval

<b>Evaluation Point</b>	<b>Bottom Performer</b>	<b>Top performer</b>
Are there any Internal audits carried out to monitor the performance	Never/rarely	Organisation has an internal audit team responsible for monitoring the performance and carrying out regular audits.
How often external audits are carried out?	Never/rarely	The frequency of the audit is decided by the Management and is conducted regularly

*Table 2: Evaluation Table to Measure performance*

## **7.2 Performance measures of contract management**

The below section gives a set of performance indicators which is used by the contract management team to assess the performance of different aspects in the contract life-cycle. Performance category can be broadly classified into cost, quality, time for processing, overall productivity and system integrity. The information obtained from the KPI's can be used to identify the system's strengths and weaknesses. Feedback from the analysis is used to develop a new plan to rectify the weaknesses. Organisations have started to move from performance measurement to performance management that ensures a continuously improving contract management process. This is considered one of the best industrial practices. (United States Agency for International Development, 2013)

Based on the framework and the evaluation criteria mentioned in section 7.1, there are certain performance measures which can help HDEC to identify their performance with improved contract management system. However, to do so information needs to be gathered from their master database which includes:

- Contracts issued by HDEC, Contract management records, Tender documents, Procurement log, Annual reports, Costs involved
- Inspection/test reports
- Shipment details, Received goods, Human resources records, Training logs

*The Key Performance Indicators are mentioned below in the table.*

Category	Indicator	Performance Measure	Formula	Description	Best practices
Quality	Supplier Performance	Supplier deliver goods in accordance with the contract terms	$\left( \frac{\text{No. of orders meeting all Contract criteria / Total number of orders received}}{100} \right) \times 100$	The product order compliance indicator measures the percentage of contracts executed by each supplier that met the performance criteria identified in the contract.	Achieving 100% compliance in all contracts is practically difficult. Contract Management team should review the past performances of the supplier and establish an internal benchmark for improvement. These levels can be slowly increased depending on the performance achieved.
Time	Supplier Performance	On-time delivery of orders by the supplier	$\left( \frac{\text{No. of orders received on time / Total number of orders scheduled for delivery}}{100} \right) \times 100$	The lead time performance indicator measures whether the number of contracts completed on time and matches the scheduled date. The findings are tabulated in the agreed in the contract system or on a supplier performance Receipt of correct quantities and proper shipping documents is also considered while determining "on-time delivery".	Contract team reviews the difference between the stipulated delivery date in the contract against the actual delivery date. The findings are tabulated in the system or on a supplier performance scorecard. Negative value indicates delayed deliveries. Total number of delays can be identified.

Category	Indicator	Performance Measure	Formula	Description	Best practices
Cost	Contract cost	How efficiently the contract executed in terms of total value	$\left( \frac{\text{Total costs allocated to the contract process}}{\text{Total value of annual procurement}} \right) \times 100$	<p>This indicator measures the average cost associated with procuring goods against the total value of goods purchased within a specific period</p>	<p>It is the responsibility of the contract manager to provide feedback to the senior management about the cost involved in the procurement process. The ways to reduce the overall cost are identified, however not compromising the quality of the products and process. The target cost should be periodically reviewed and adjusted as per the market conditions.</p>
Cost	Contract cost	How efficiently is the contract executed in terms of total number of contracts in a designated period	$\left( \frac{\text{Total costs allocated to the contract process}}{\text{Total number of contracts}} \right) \times 100$	<p>Alternate way to calculate the efficiency of the process is to determine the cost involved against the number of contracts executed within that period. The value obtained gives the average cost incurred while executing a single contract</p>	<p>Management is responsible for allocating suitable resources with adequate knowledge and skills. This will result in smooth functioning of the supply chain. The top performers are utilising 23.8% of the work force to develop and maintain contracts.</p>

Category	Indicator	Performance Measure	Formula	Description	Best practices
Time	Payment Processing Time	There are no delays in processing payments to suppliers	$\left( \frac{\text{Number of supplier invoices paid on time}}{\text{Total number of supplier invoices paid}} \right) \times 100$	<p>This indicator gives the Percentage of supplier payments made within the payment due date or milestone period as indicated in the contract</p>	<p>Contract department and finance management team works in tandem to settle the invoices by the due date. Despite payment being carried out by finance, contract team ensures that supplier payment is done on time. Contract management team collects details such as Date of invoice, Invoice date, Actual date of payment, feedback from suppliers, etc. They use these data to analyse the number of payments done on time. They share this information with top management to take necessary actions.</p>
Overall productivity	Emergency contracts	Quick delivery process/Preventing stock purchases. This is calculated with help value of the contracts	$\left( \frac{\text{Total value of emergency orders}}{\text{Total value of all orders placed}} \right) \times 100$	<p>This Indicator is used to determine the percentage of contracts issued in short period. These contracts are used where products are urgently required. Alternatively, to reduce the high prices in purchasing stock product</p>	<p>Placing emergency orders can have both positive and negative effects. In certain cases, placing emergency orders can be a result of insufficient planning, missed requirements, etc.,. Such activities are monitored and reviewed for future purposes.</p>

Category	Indicator	Performance Measure	Formula	Description	Best practices
Overall productivity	Emergency contracts	Quick delivery process/Preventing stock purchases	$\frac{\text{Total number of Emergency orders}}{\text{Total number of orders placed}} \times 100$	Productivity can also be determined in calculating the number of emergency orders placed.	In certain cases, placing emergency orders can be a result of insufficient planning, missed requirements, etc.,. Such activities are monitored and reviewed for future purposes.
Integrity	Transparent Contract Awarding process	Usage of competitive bidding practices in the contract system	$\frac{\text{Total award value of each competitive method}}{\text{Total annual value of awards}} \times 100$	This indicator provides the Percentage of total value of contracts that were awarded through a competitive bidding process	Contract management team can review the details regarding the number of orders placed and set a baseline for it depending upon the purpose of placing the contract. It can have two values, higher for positive reasons and lower for negative reasons

Table 3: Key performance Indicators

## 8 Conclusion

Improving HDEC performance by developing a better contract management lifecycle was the objective of this project. This framework and evaluation criteria will aid HDEC to improve the current process and adopt industries best practices into their contract management system. Implementation of the framework needs planning and allocation of resources. With additional efforts, a much better result can be achieved.

Market study and analysis of this project found that top companies are managing the contracts more efficiently. HDEC uses a simple tracking system to monitor the project deliverables. It also utilizes the procurement team to manage the contracts. The resources are reliable, but at the same time consuming. Possibility of errors are quite high. Standard contracts are used for procuring piping items with minimum changes made to the delivery and pricing. After detailed analysis of contractual terms used and understanding the current contract management system, the pros and cons of the ongoing contract lifecycle of Hyundai is identified.

One of the ways to improve the existing system is to design a contract life-cycle framework, focussing from drafting a contract to executing it efficiently. The framework gives a birds' eye view of the process to the contract management team. The responsibility lies with each stakeholder to carry out the assigned tasks effectively. This is the main contribution towards this project.

There are numerous organisations in the market. However only a few become industrial leaders. It is because of the practices they follow. Smaller organisations start to adopt these processes and modify it to their requirements. Similarly, the clauses which were not covered in HDEC contract are identified by analysing the procurement contracts of leading oil companies like Shell, BP, chevron, Statoil, Total, etc. This shall make HDEC's contract more effective and improves the clarity. The second part of the analysis covers the contract management process followed by industrial leaders. Simultaneously the key areas which are lagging in HDEC process is also identified. The sub-areas mentioned in the framework needs to be concentrated to improve the process performance.

The evaluation table is prepared based on the framework and it acts as a checklist for the contract management team to determine the effectiveness of the framework. The questionnaire gives the best practice adopted for that process at the same time process adopted by a low performer as well. Using the table, HDEC can identify where their current system lies. The next table gives a set of performance measures which is used to determine aspects including cost, quality, time, productivity and integrity. The formulas are used to calculate the

performance measures with values obtained by HDEC database. The results can be compared against the best practices.

Implementation of the framework is challenging process. HDEC has got operations in South Asia, Middle East and Africa with headquarters in South Korea. Majority of the workforce being operated in middle-east. A separate plan is required to implement the changes into the system analysing the cost and time factors as well. This framework is a good tool, but there are lots of opportunity to improve during the implementation phase. Little more fine tuning and obtaining more inputs from HDEC regarding the facts/figures shall help in maximising the frameworks potential.



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# APPENDIX

## Appendix A - Supply Contract of Hyundai Engineering & Construction Co., Ltd.

SARB  
EPC PKG #4  
PROJECT



SUPPLY CONTRACT/PURCHASE ORDER

**SATAH AL RAZBOOT FIELD DEVELOPMENT  
PROJECT PACKAGE 4 EPC WORK(SARB)**

**SUPPLY CONTRACT/PURCHASE ORDER**

For

**BALL VALVE (API 6D)**

BETWEEN

**HYUNDAI ENGINEERING & CONSTRUCTION CO., LTD.**

AND

**VIRGO VALVES & CONTROLS PRIVATE LIMITED**

CONTRACT NO. AD204-600-G-09385-4600046788  
MR NO. AD204-600-G-02836



*Virgo Valves & Controls Private Limited*  
Sr. No. 277/276, Raisoni Indl. Park, Phase II,  
Village Maan, Hingewadi, Pune - 411 057

SARS  
EPC PKG #4  
PROJECT



SUPPLY CONTRACT/PURCHASE ORDER

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*Vijaya Vaidya & Company Private Limited  
Ss.No.27/2023, Bellary Post, Taluk, Channarayana  
Village Manay, Taluk, Bellary, Dist. Bellary - 577 105*

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SARB  
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PROJECT



SUPPLY CONTRACT/PURCHASE ORDER

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*M/S*  
Virgo Valves & Controls Private Limited  
Sr. No.277/278, Rajwadi Indl. Park, Phase II,  
Village Maan, Hinjewadi, Pune - 411 057

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PROJECT



**SUPPLY CONTRACT/PURCHASE ORDER**

**P R E A M B L E**

This Contract ("the Contract") is made on April 16, 2014 as a deed between:

Hyundai Engineering & Construction Co., Ltd., having offices at Hyundai Building, 75, Yulgok-ro, Jongno-gu, Seoul 110-920, Korea. (hereinafter referred to as "the Purchaser or Contractor"), of the one part, issues Supply Contract behalf of Consortium partners which are defined as below.

And Virgo Valves & Controls Private Limited having offices at 277, Hinjewadi Phase II, Maan (Mulshi), Pune, Maharashtra, 411 057, India. (hereinafter referred to as "the Vendor or Supplier") of the other part

Herein referred to as the "Main Contract") dated April 1, 2012 with ADMA-OPCO (Abu Dhabi Marine Operating Company), (hereinafter referred to as "the Company"), a company of limited liability organized under the law of the United Arab Emirates for the Engineering, Procurement, Supply, Construction, Pre-commissioning, Commissioning and Start-up of SATAH AL RAZBOOT FIELD DEVELOPMENT PROJECT – EPC PACKAGE 4, to be constructed at Abu Dhabi, United Arab Emirates.

Whereas, the Purchaser, as part of its performance of its obligations under the Main Contract, desires to purchase certain materials and equipment (the goods) in accordance with the terms and conditions set out hereunder.

and,

Whereas, the vendor, who

possesses the necessary know-how, experience, capability and availability, has qualified and experienced personnel with sufficient facilities, premises and equipment is properly financed to carry out such work.

has agreed to supply these goods on the terms and conditions hereof.

Now therefore, it is hereby agreed as follows:



*MKS*  
**Virgo Valves & Controls Private Limited**  
Sr. No.277/278, Raisoni Indl. Park, Phase  
Village Maan, Hinjewadi, Pune - 411 057

SARB #4 – SATAH AL RAZBOOT FIELD DEVELOPMENT PROJECT PACKAGE 4



SARB  
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SUPPLY CONTRACT/PURCHASE ORDER

**ARTICLE 1 – SCOPE OF SUPPLY**

The scope of supply is fully detailed in these contract documents, in particular in Exhibit C.

The supply of such goods shall be in full compliance with the data sheets, specifications, drawings and standards detailed in Exhibit C and also all the terms and conditions set out below.

**ARTICLE 2 – DEFINITIONS AND INTERPRETATION**

2.1 Definitions

The following expressions and derivatives thereof appearing in the Contract shall have the meanings hereby assigned to them unless specified otherwise.

**Approval** means the Purchaser's prior written assent. Approval shall in no way be construed as relieving the Vendor of any of his obligations, responsibilities under the Contract or at law. Approval or approved shall be construed accordingly.

**Changes** means any modification to the Contract mutually agreed between the Purchaser and the Vendor in accordance with the provisions of Article 11.

The **COMPANY** or ADMA-OPCO or the **OWNER** means ABU DHABI MARINE OPERATING COMPANY (hereinafter referred to as "the Company", "ADMA-OPCO" or "the Owner") a company organized and existing under the laws of United Arab Emirates and having its address at P.O. Box 303, Abu Dhabi, United Arab Emirates.

**Company's Representative** means the person or persons designated by the Company to act on its behalf during the execution of the Work;

**Contract/Purchase Order** means the supply agreement agreed between both parties created by the execution of this document with the exhibits and annexes referred to therein together with the agreed changes (if any).

**Contract/Purchase Order date** means the agreed start date of this contract as detailed in the LOI and in the Contract acceptance attached hereto.

**Documents** means all documents and data relating to the Goods and/or Work, including but not limited to specifications, drawings, designs and reports on fabrication, delivery and/or inspection, mill certificates, instructions for handling and/or assembly, Manufacturing Record Book(MRB), Installation Operation and/or Maintenance manuals(IOM) and the like to be supplied by the Vendor to the Purchaser under the Contract. It also includes computer generated drawings, lists charts, etc., and other data used to form a permanent record of the PROJECT progress and "As-Built" condition

**Exhibit** means the attachments to this contract Exhibit A through C with all documents included and referred to therein.

**Field** means SITE(S) and all other locations where WORKS are provided or performed by CONTRACTOR.

**FINAL ACCEPTANCE** means the stage at which CONTRACTOR and VENDOR has fulfilled all its obligations under the AGREEMENT with COMPANY and the WARRANTY following issue of the PROVISIONAL ACCEPTANCE CERTIFICATE has expired.



*Virgo Valves & Controls Private Limited*  
Sr. No.277/278, Palsod Incl. Park, Phar  
Village Maan, Hinjewadi, Pune - 411

SARB #4 – SATHIJI, BAZPOOTI FIELD DEVELOPMENT PROJECT PACKAGE A

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SUPPLY CONTRACT/PURCHASE ORDER

**FINAL ACCEPTANCE CERTIFICATE** means the certificate signed by COMPANY and issued to CONTRACTOR at the conclusion of FINAL ACCEPTANCE.

**Goods** mean collectively any material, machinery, equipment, articles, parts, spares items provided for in the Contract.

**INSTALLATION** means the permanent new, revamped and refurbished Facilities (including TIE-INS) constituting the PROJECT.

**LOI/LOA** means the Letter of Intent/Letter of Award, a letter which may be issued by the Purchaser to the Vendor to initiate a contract prior to the formalisation of the full contractual package

**Main Contract** means the Agreement between COMPANY and Purchaser that has been concluded and signed by COMPANY and Purchaser for the execution of the Project.

**Material Requisition ("MR")** includes specifications and related documents that describe the technical scope of Goods and/or Work.

**Party / Parties** mean(s) either the Purchaser or the Vendor or both as dictated by the text.

**Plant** means the facilities at Artificial Islands and Zirku Island, United Arab Emirates.

**Contract / Purchase Order Price** means the consideration specified in the Contract to be paid by the Purchaser to the Vendor for the complete delivery of the Goods and performance of the Work under the Contract.

**Project** means all activities of Company, Licensors, Purchaser and other contractors for the establishment of the Plant, including but not limited to, Engineering, Procurement, Fabrication, Construction, Installation, Supervision, Testing, Pre-commissioning, Commissioning, Start-up and Test Run, for which the works under the Main Contract are being performed.

**Purchaser / Contractor** means HYUNDAI ENGINEERING & CONSTRUCTION COMPANY, Ltd., having offices at Hyundai Building, 75, Yulgok-ro, Jongno-gu, Seoul 110-920, Korea.

**Provisional Acceptance** means the stage when all WORKS, COMMISSIONING, TEST RUNS and Initial Operation, including Goods supplied by Vendor(s), have been successfully completed and INSTALLATIONS are ready for continuous commercial operation, and all the associated works, including delivery of copies of all operating and maintenance manuals, all tools, all documents, certificates and records in accordance with the requirements of Main Contract and this Contract has been achieved.

PROVISIONAL ACCEPTANCE MILESTONE date for the whole WORK is 17th September 2017

**Provisional Acceptance Certificate (PAC)** means the certificate(s) signed by COMPANY and issued to the Contractor confirming PROVISIONAL ACCEPTANCE of the INSTALLATIONS or parts thereof, provided, however that where more than one (1) PAC is issued all AGREEMENT warranty provisions are contingent on and commence from the issuance of the final PAC.

**READY FOR COMMISSIONING** means the stage when all Pre-COMMISSIONING activities and tests have been successfully completed in full compliance with AGREEMENT SPECIFICATIONS, drawing, PROJECT procedure and checklists included in Exhibit C.



SARB #4 - SATAJAL RAZDOL FIELD DEVELOPMENT PROJECT PACKAGE A

**Virgo Valves & Controls Private Limited**  
Sr. No. 27/2728, Palsonitank, Fark, Phase II  
Village: Maan, Halawati, Puna - 411 05

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SUPPLY CONTRACT/PURCHASE ORDER

**READY FOR COMMISSIONING CERTIFICATE(S)** means the certificate(s) signed by COMPANY and issued to CONTRACTOR confirming that all Pre-COMMISSIONING activities and tests have been successfully completed and COMMISSIONING can commence.

**READY FOR START-UP** means the stage at which all non-reservoir fluid systems are commissioned and operational, all other systems are commissioned ready for the introduction of reservoir fluids, and all systems' **READY FOR START-UP CERTIFICATES** have been issued in accordance with COMPANY'S Guideline for Pre-commissioning, Commissioning and Hand-over of Projects (GDL-006).

**READY FOR START UP(PROJECT) MILESTONE** date is 17th March 2017.

**READY FOR START-UP CERTIFICATE(S)** means the certificate(s) signed by COMPANY in accordance with COMPANY'S Guideline for Pre-commissioning, Commissioning and Hand-over of Projects (GDL-006) an issued to CONTRACTOR at **READY FOR START-UP** of each system comprising the **INSTALLATION(S)** or part thereof.

**READY FOR TEST RUN** means the date on which CONTRACTOR and COMPANY have agreed that all COMMISSIONING activities prior to TEST RUN are completed, stable operating conditions are established and TEST RUN can commence. Or, those buildings are ready for occupancy.

**READY FOR TEST RUN CERTIFICATE(S)** means the certificate(s) signed by COMPANY and issued to CONTRACTOR confirming that all COMMISSIONING activities prior to TEST RUN are completed and that TEST RUN(S) can commence. Or, that buildings are accepted for occupancy by COMPANY.

**Shop** means the location(s), other than the Site, where the Vendor and its sub-vendor(s) shall engineer, fabricate and assemble the goods, or any part thereof, including the vendor's offices, premises and workshops.

**Site** means locations where **INSTALLATIONS** will be constructed, installed, or erected and includes approved work sites where parts of installations are to be fabricated and assembled prior to being transported to the permanent work site.

**Specifications** mean all and any technical documents either listed or mentioned in the Contract including Codes and Standards referred to therein.

**SPECIFICATIONS** means the specifications, drawings and procedures referenced in the EXHIBIT C or implied therein, and any modifications or additions thereto as may, from time to time, be approved in writing by COMPANY.

**Sub-vendor** means any one or more person or entity (of whatsoever tier) that has been approved by the Purchaser to supply the Goods and/or execute any part of the Work and for whom Vendor shall be responsible. For the sake of clarity, sub-vendor will be considered as part of Vendor.

**Vendor/Supplier** means any company, organisation or person to whom the Contract is addressed or their authorized agents, successors or assignees.

**Vendor Item(s)** mean(s) any and all equipment and materials necessary for the full and complete performance of the Work in order to allow the complete realization of the Goods and which are to be supplied by the Vendor as set out in the Contract.

Vendor Items shall include capital spare parts, special tools, commissioning and start-up spares and consumables to be incorporated into the equipment package(s) or



*Vino Valves & Controls Private Limited*  
27/278, Rajesh Invt. Park, Phase  
V, Manoj Mahan, Hingewadi, Pune - 411008

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**SUPPLY CONTRACT/PURCHASE ORDER**

specified in EXHIBIT C, during the Shop inspection tests, Commissioning, Start-up of the equipment package(s), except fuels, water and electricity used on Site which shall be provided by the Purchaser or the COMPANY.

**WARRANTY PERIOD** means the twelve (12) months period from the date of issue of the final PROVISIONAL ACCEPTANCE CERTIFICATE, provided that the WARRANTY

**Work** means all those acts, things and activities to be done or provided by the Vendor for the purpose of fulfilling all its obligations under the Contract.

**"Year", "month" or "day"** and any other references to time shall be constructed by reference to the calendar.

**2.2 Significance of Expressions**

Where the context so requires, words importing the singular shall also include the plural, and vice-versa. At any time and unless expressly stated otherwise, when the following expressions and derivatives thereof appear in the Contract, their connotations shall be extended or limited as set out hereunder:

- "Including", "included", "include", "such as", "comprising", "comprise", and the like shall be deemed to be completed by the expression "but not limited to".
- "Require", "request", "submit", "answer", "notify", "instruct", "state", "inform", "agree", and the like shall be deemed to be completed by the expression "in writing".
- "Applicable laws" shall mean all laws, ordinances, rules, regulations, by-laws, decrees, orders and the like, whether of governmental or other authority or agency having jurisdiction over the Parties, Work, Equipment Package (s), Shop and Sites and which are or may become applicable.
- "Fault", "breach", "failure", "default", "deficiency", "defective performance" and the like shall be understood as any failure whatsoever to comply with Contract requirements, whether by act, omission, negligence, mis-performance, non-performance or late performance.
- "Days" shall mean "consecutive calendar days", it being understood that all dates and time periods referred to in the Contract relate to the Gregorian calendar.
- "He", "him" and "his" are used in relation to the Vendor whereas "it" and "its" are used in relation to the Purchaser or the Company.
- "Articles" and "sub-Articles" shall mean Articles and sub-Articles of the Agreement unless otherwise specified.

**ARTICLE 3 - ENTIRE AGREEMENT AND ORDER OF PRIORITY**

3.1 The Contract constitutes the sole and entire agreement between the Purchaser and the Vendor. The terms of the Vendor's proposal are incorporated into and made a part of the Contract only to the extent of specifying the nature and description of the Goods and Work ordered and then only to the extent that such terms are consistent with the other terms of the Contract. No other terms or conditions of the Vendor's proposal shall be binding upon the Purchaser unless expressly accepted by the Purchaser in writing.

3.2 The Contract shall become effective upon the Supplier's receipt of "Notice to Proceed



SARB #4 - SATANAJI, RAZPOOT, FIELD DEVELOPMENT PROJECT PACKAGE A

*MJB*  
**Virgo Valves & Controls Private Ltd.**  
Sr. No. 277/278, Raiboni Indt. Park, Pr  
Vijaya Nagar, Hingewadi, Pune - 411 007

SARB  
EPC PKG #4  
PROJECT



## SUPPLY CONTRACT/PURCHASE ORDER

The Purchaser shall have the right, in its sole and absolute discretion, at any time prior to the issuance of the Purchaser Order, to terminate this Contract by giving immediate written notice to Supplier in case of Project termination by Company.

- 3.3 The Purchaser shall have the right, in its sole and absolute discretion, at any time prior to the issuance of the Purchaser Order, to terminate this Contract by giving immediate written notice to Supplier in case of Project termination by Company.
- 3.4 In the event of conflict amongst the above documents, the order of priority shall be as follows:
- Notice To Proceed(NTP)
  - the Supply Contract
  - the Material Requisition
  - Any other Documents forming part of Contract
- 3.5 In the event of conflicts between various provisions within the same documents, the Purchaser will indicate which one it considers the most restrictive and Vendor shall comply with.
- 3.6 In case of any conflict or deficiency among any documents constituting the Contract, it is Vendor's responsibility to give Purchaser a written notice of such conflict or deficiency, the Purchaser shall issue any necessary clarification or instruction. If Vendor proceeds with any Work without requesting resolution of such conflict or deficiency, then Purchaser's decision as to the governing requirement shall be final, and all costs incurred in correcting Vendor's erroneous interpretation shall be for Vendor's account.
- 3.7 All parts of the Contract are intended to be correlative and complementary, and any Work required by one part and not mentioned in another shall be performed to the same extent and purpose as though required by all, at no additional cost to Purchaser. The misplacement, addition or omission of a word or character shall not change the intent of any part of the Contract from that set forth by the Contract as a whole.
- 3.8 Neither review, approval, acknowledgement nor certificate given by Purchaser shall relieve Vendor from any or all of its liabilities or obligations under the Contract

### ARTICLE 4 – GOVERNING LAW

The Contract and any dispute arising out of or in connection with the formation, validity, construction and performance thereof shall be governed by and construed in accordance with the Laws of Republic of Korea.

Without prejudice to the above, for any Work performed by Vendor in the United Arab Emirates, the Vendor shall comply with the laws of United Arab Emirates.

### ARTICLE 5 – PURCHASER ORDER ACCEPTANCE

Within ten (10) days from the Purchaser Order receipt, the Supplier shall return to the Purchaser the Purchaser Order counter-signed in original for acceptance.

### ARTICLE 6 – DELIVERY SCHEDULE



*Virgo Valves & Controls Private Limited*  
St. No.277/278, Rajawadi Incl. Park, Phase II,  
Village Mean, Hingewadi, Pune - 411 057

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**SUPPLY CONTRACT/PURCHASE ORDER**

The delivery and delivery point(s) are set by the delivery schedule in EXHIBIT B. The Supplier therefore hereby undertakes to complete the work on or before the delivery date(s) and times considering test and inspection time required before the shipment.

Delivery dates for Vendor Documents are those established in EXHIBIT C, to be agreed at Kick-off Meeting. Any request by the Supplier for changes in delivery time shall not be considered, unless formally accepted by the Purchaser.

The Supply will not be considered as completed in accordance with the Purchase Order Terms and Conditions, if all the documents required for forwarding the materials as well as the required technical documentation and certificates foreseen at the Supply delivery time (in accordance with EXHIBIT B) in accordance to the requirement detailed in the EXHIBIT C, have not been forwarded to the Purchaser's offices.

Supplier hereby guarantees timely performance of the Supply as per the delivery schedule and the delivery dates. If the Supplier fails, Supplier shall pay the liquidated damages specified in Article 9 of this Terms and Conditions. Purchaser shall be entitled to terminate this Contract in accordance with Article 13, 14 and 15 once the maximum period covered by liquidated damages has expired.

In the case where any of the goods, equipment or Spare Parts which are to be exported outside of the European Union are classified by the relevant authorities as "dual use", Purchaser shall or shall cause the end user of such goods, equipment or Spare Parts where the goods, equipment or Spare Parts are destined to be installed and/or used, to provide Supplier with and "End User Statement" signed by end user at the request of Supplier that shall be sent to Purchaser no later than four (4) months before the shipment of goods. In case of delay in proving such documents, Supplier shall not liable or be considered in breach or in default of any of its obligations under the Contract.

If the Materials cannot be delivery at the time when they are due or ready for dispatch in accordance with the Purchase Order, after Purchaser's written confirmation, Vendor shall store the Materials, safeguard them and take all steps to prevent their deterioration during such storage period. Purchase shall, except for any reason attributable to Vendor, be liable to Vendor for the reasonable justified costs of storage, including insurance of doing so, after a grace period forty-five (45) days.

**ARTICLE 7 – TITLE TO GOODS AND DOCUMENTS**

**7.1 Title to Goods**

Title to the Goods and Work shall pass to Purchaser on whichever is earlier of the following dates:

- a. when delivered to the Destination;
- b. when Vendor receives any payment from Purchaser, in the same proportion as the value of the particular payment represents;

Such title shall be free and clear of any charge, lien, encumbrance or other security interest.

**7.2 Title on Purchaser – supplied documents**

All documents issued by the Purchaser shall remain the property of the Purchaser and shall be returned to the Purchaser by the Vendor as soon as they are no longer necessary for the performance of the work and at the latest, at the time of delivery of the final documentation.



SARB #4 – SATHI AJ, RAZPOOL, FIELD DEVELOPMENT, PROJECT, PACKAGE A

*M.S.*  
Mango Valves & Controls Private Limited  
St. No. 27/273, Rajaraj Ind. Park, Phase  
Village: Bani, Hampden, Pune - 411 018

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SUPPLY CONTRACT/PURCHASE ORDER

The Vendor undertakes not to use such documents provided by the Purchaser for any other purpose than the performance of the work.

ARTICLE 8 – TRANSFER OF RISK OF LOSS AND CUSTODY

Risk of loss in respect of the Goods and/or Work shall not pass to the Purchaser until certified delivery of the Goods and/or the completion of the Work is achieved by the Vendor in accordance with the Supply Contract. Therefore, up to successful delivery and/or completion of the Work under the Contract, Vendor shall have the full responsibility for the care of the Goods and/or Work.

If any loss or damage happens to the Goods and/or Work during the period when the Vendor is responsible for their care, the Vendor shall without delay rectify the loss or damage so that the Goods and/or Work conform with the Supply Contract.

ARTICLE 9 – LIQUIDATED DAMAGES

9.1 Liquidated Damages for Delay of Delivery and Documentation

Without prejudice to any other contract provisions whatsoever and/or the Purchaser's right under the Contract, should the Vendor fail to complete the Work (including provision of all final documentation) in accordance with the Contract, the Purchaser shall have the right to apply the following provision of liquidated damages.

In such case, the Vendor shall pay the Purchaser damages for such failure as liquidated damages and not by way of penalty, one percent (1.0%) of the delayed portion of material for each week of delay after the agreed delivery date without any prior formal notice/demand from Purchaser. The sum recoverable shall not exceed ten percent (10%) of the total Contract Price.

Zero point two percent (0.2%) of Contract Price for the delayed portion per each day up to three percent (3%) shall be paid by the Supplier in case that major vendor data i.e Monthly Progress Report, Data sheet, Drawing, QA/QC Manual, ITP and the required data which shall be agreed by both are not submitted to the Purchaser within time specified in the documentation schedule in Technical Specification. - This is valid for First-Submission of Documents only, and document submission date will be

The total aggregate liability of Supplier for Liquidated Damages shall not exceed thirteen percent (13%) of the total Contract Price.

Delivery will be extended for excusable delays as provided for at Article 12 below and shall also be extended for any changes or delays caused by Purchaser

9.2 Liquidated Damages for Lack of Performances (MAKE GOOD)

Supplier shall guarantee the Guarantees requirements specified in Exhibit C during the Factory Acceptance Test at Vendor premises and Site Acceptance Test at Field. If the Performance Guarantees specified in the Contract are not met, Supplier shall at its cost and expense make such changes and modifications as may be necessary so as to meet such Guarantees. The Supplier shall notify the Purchaser upon completion of the necessary changes and modifications and shall request the Purchaser to repeat the Performance Test as per contractual requirement. Any punch incurred at FAT / SAT shall be rectified and the punch clearance(s) shall be proved by Purchaser representative(s) attendance.



Virgo Valves & Controls Private Limited  
Sr. No. 277/276, Raisoni Indl. Park, Phase I,  
Village Maan, Hinjewadi, Pune - 411 004

SARB #4 - SATAJ (M. BAZZDOOT) FIELD DEVELOPMENT PROJECT PACKAGE 4

discuss during KOT as per clause No. 6

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**SUPPLY CONTRACT/PURCHASE ORDER**

Notwithstanding the foregoing, Supplier shall have no liability to the Purchaser for liquidated damages for failure to achieve the Performance Guarantees with respect to any Unit unless the Company suffers economic harm as a result of the failure of such Unit to achieve the Performance and no liquidated damages for performance shortfall are imposed to the Purchaser.

All schedule delays caused by Lack of Performance shall be deal with Article 9.1.

Subject always to the right of Purchaser to terminate the Purchase Order after the maximum amount is reached, the payment of liquidated damages shall not relieve Supplier from its obligations to diligently complete the Works or from any other obligation or liability under the Purchase Order. Purchaser's entitlement to demand payment of liquidated damages shall remain effective, without Purchaser having to reserve the right to do so on acceptance to the materials and/or the works.

**ARTICLE 10 – NON ASSIGNMENT OF CREDITS**

All credits due to the Supplier under the Purchase Order shall not be assigned and the Supplier will therefore be responsible to the Purchaser for any breach to the aforesaid Agreement.

Furthermore, the Supplier will not be allowed to assign or transfer the benefit or any right to receive payment of any sum due to him or becoming due to him from the Purchaser.

**ARTICLE 11 – CHANGES**

11.1 The Purchaser reserves the right, at any time, to make changes in quantity, quality, drawings and specifications, methods of shipment and packaging, schedules and the place of delivery in respect of any of the Goods and/or Work under the Contract. The Vendors shall execute and be bound by each change.

11.2 In such event, an equitable adjustment in Price and/or time of performance mutually satisfactory to the Purchaser and the Vendor shall be discussed and negotiated by the Parties, provided that any claim by the Vendor for such change notice be made in writing by Vendor within ten (10) days after receipt of the Purchaser's notice of any such change.

11.3 Any adjustment in Price and/or time of performance will be made only if agreed to in writing by the Purchaser, and no agreement or understanding modifying the conditions or terms of the Contract shall be binding upon the Purchaser unless made in writing and signed by the Purchaser's authorized representative.

11.4 In no circumstances any variation request by Vendor pursuant to any instruction of modification by Purchaser, whether or not agreed between Purchaser and Vendor, will authorize Vendor to refrain from or to stop or slow down the Work, unless specifically agreed and authorized in writing by Purchaser.

11.5 Vendor shall not be entitled to any compensation other than as provided for in the variation order including any compensation for impact on time and cost of Goods and/or Work arising out of execution of the variation order.

**ARTICLE 12 – FORCE MAJEURE – LOSS OF RIGHT**



*Virgo Valves & Controls Private Limited*  
 Cr. No 2777278, Rajkot Intl. Park, Phase - II  
 Village Masan, Tal. Gandhinagar, Dist. Rajkot - 360001



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**SUPPLY CONTRACT/PURCHASE ORDER**

No Party to this Contract shall be liable to the other Party for any failure of, or delay in, performance of his obligations hereof or be deemed to be in breach of this Contract, if such failure or delay has arisen from "Force Majeure".

Force Majeure is defined as circumstances and conditions beyond the control of either party, which would render it impossible for either the Purchaser or the Supplier to fulfill their obligations under this Contract or delay such fulfilment. "Force Majeure" may include, but is not limited to, exceptional circumstances and conditions of the kind listed below, so long as the definition given above is satisfied.

- a. war and other hostilities, invasion, act of foreign enemies, mobilization, requisition or embargo
- b. rebellion, revolution, insurrection, military or usurped power and civil war
- c. riot, commotion or disorder, except where solely restricted to employees of the Supplier
- d. act of god
- e. strike organized by Labour Union, Lockout due to this strike.

If either party to the Contract is prevented or delayed from or in performing any of his obligations under the Contract by Force Majeure, he may notify the other party of the circumstances constituting Force Majeure and of the obligation, the performance of which is thereby delayed or prevented, and the party giving the notice shall thereby be excused the performance or punctual performance, as the case may be, of such obligation for so long as the circumstances of prevention or delay may continue.

In the event of such circumstances, the Supplier shall immediately advise the Purchaser with evidence by fax, confirmed by registered letter, giving full particulars thereof including the date of first occurrence and of the cause or event giving rise to it. A statement in English from the Supplier's Chamber of Commerce shall also be provided including evidence of such particulars.

If circumstances and conditions of Force Majeure persist for more than four (4) months, either the Purchaser or the Supplier shall have the right to terminate the Contract or to negotiate any further extension of the above mentioned by issuing written notice within thirty (30) days after the period aforesaid.

**ARTICLE 13 – TERMINATION FOR VENDOR'S DEFAULT**

In the event the Vendor shall (a) delay the delivery of the Goods beyond the maximum period covered by liquidated damages, if any, or (b) become insolvent, or (c) become bankrupt or go into liquidation, or (d) make a general arrangement or assignment for the benefit of its creditors, or (e) have a receiver or trustee appointed to manage its affairs, or (f) be subject to the attachment, execution or other judicial seizure of all or substantially all of its assets, or (g) fail to correct any default of the Vendor in complying with any of the provisions or requirements of the Contract within a reasonable period as may be determined by the Purchaser after being notified in writing of such default by the Purchaser, then, and in each such case, the Purchaser may forthwith, by written notice to the Vendor and without prejudice to any other rights or remedies which the Purchaser may have hereunder or at Law, terminate further performance by the Vendor of its Work under the Contract.

Upon receipt of notice from Purchaser, Vendor shall discontinue the supply of the Goods and the Work and perform whatever is required under (a) to (f) of Article 14 hereunder. In the event of such termination, the Purchaser may complete or have completed the performance of the Work under the Contract by such means as the Purchaser selects, and the Vendor shall be responsible for any additional costs incurred by the Purchaser in so doing. Any amounts due to the Vendor for any of the Goods delivered and/or Work performed by



SARB #4 – SATHI AL RAZBOOT FIELD DEVELOPMENT PROJECT PACKAGE A

M/s. Valves & Controls Private Limited  
Plot 278, Patsoni Indl. Park, Phase  
II, Hingewadi, Pune - 411 07

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**SUPPLY CONTRACT/PURCHASE ORDER**

Vendor in full compliance with the terms of the Contract prior to such termination shall be subject to setoff of the Purchaser's additional costs of completing the Contract as aforementioned and other damages, costs or expenses incurred by the Purchaser arising from the occurrence of any of the events specified herein.

**ARTICLE 14 – PURCHASER’S RIGHT OF TERMINATION FOR CONVENIENCE**

The Purchaser shall have the right to terminate further performance of all or any separate part of the Contract at any time by giving written notice to the Vendor. On the date of termination stated in said notice, the Vendor shall:

- (a) discontinue all Work and Goods pertaining to the Contract;
- (b) place no additional purchase order(s) with any third party;
- (c) use its best efforts to effect the immediate termination of purchase order(s) which it may have placed with any third party in relation to the Contract if so requested by the Purchaser;
- (d) preserve and protect the Goods or any part thereof on hand purchased for or committed to the Contract;
- (e) preserve and protect both Work in progress and all completed Work whether in the Vendor’s plant or that of its Sub-Vendor(s), pending the Purchaser’s instructions concerning disposition;
- (f) dispose of the said Work in accordance with the Purchaser’s instructions.

Payment to the Vendor, or refund to the Purchaser, as the case may be, shall be based on that portion of the Work and/or Work performed to the Purchaser’s satisfaction to the date of termination, including reimbursement for reasonable expenses resulting from such termination, provided such amounts claimed are substantiated by documentation satisfactory to the Purchaser.

The above items of reimbursement and payment for Goods and/or Work supplied and/or performed shall constitute the entire liability of the Purchaser, and the Vendor shall not be entitled to recover for any other expenses, damages, profits or disbursements in connection with said termination under the Contract or at law.

In the event of termination of Work, Purchaser reserves the right to physically assess the quantum of Work completed by Vendor for compensation purposes.

**ARTICLE 15 – PURCHASER’S RIGHT TO SUSPENSION**

Purchaser may, by written notice to Vendor, suspend at any time, from time to time and for any reason whatsoever, the execution of all or any portion of the work to be performed under the Contract for such time, in the manner and to the extent as the Purchaser may fix. Upon receipt of such written notice and during the suspension period, Vendor shall continue to take care of the Goods and/or Work (at whatever stage the Goods and/or Work may be). All costs incurred by Vendor because of a suspension shall be borne by Vendor if such suspension last for less than fifteen (15) consecutive days.

Upon receipt of notice to resume suspended Work, Vendor shall immediately resume execution under the Contract to the extent required in the notice.



If Vendor, by suffering delay and or incurring in costs for complying with the Purchaser’s instructions as per notice to suspend, intends to assert a claim for suspension beyond 15 consecutive days, for equitable adjustment under this Article, the Vendor must, within ten (10) calendar days after receipt of notice to resume Work, submit to Purchaser a written

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 No. 277/278, Palsoni Indl. Pk  
 Village: Madhav, Palsoni, Dist. ...

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statement setting forth the schedule impact and monetary extent of such claim, supported by documentation satisfactory in form and content to Purchaser.

The schedule of supply shall be fairly extended by the Parties for the periods of time not exceeding the duration of such suspension or for prolonged periods, which in each particular case may prove to be necessary under the given circumstances, provided that completion of the Work is or will be delayed as a direct consequence of the suspension. Vendor shall be entitled to reimbursement for additional costs incurred due to such suspension. The extent of the reimbursement will be mutually agreed between Vendor and Purchaser, provided that such additional costs incurred are documented.

In the event that the Vendor's performance under the Contract is suspended by the Purchaser due to any Vendor's default and/or non-compliance with the requirements of the Contract, such suspension shall not be basis for additional compensation to Vendor nor schedule adjustment.

Notwithstanding any dispute arising between the Parties during the achievement of the Work under the Contract, the Vendor binds itself not to suspend partly or as a whole or to delay for any reasons the execution of the WORK or any part thereof unless suspended or terminated by the Purchaser.

**ARTICLE 16 – SUB-CONTRACTING**

16.1 The Vendor shall not assign the Contract or any part hereof or any amounts due hereunder or sub-contract the Contract or any part thereof without the prior written consent of the Purchaser.

16.2 Should Vendor assign any of its obligations, responsibilities, rights and/or monies to become due to any other party without the prior written consent of Purchaser, then Purchaser reserves the right to terminate the Contract by serving 7 (seven) days notice of termination and therefore terminating the Contract, without the need of Court action.

16.3 The Purchaser shall have the right to freely assign its rights under the Contract to any third party, especially to the Company, by making an appropriate notice to the Vendor.

**ARTICLE 17 – PATENTS AND PROPRIETARY RIGHTS**

The Vendor warrants that none of the Goods furnished and/or Work performed pursuant to the Contract, nor the use thereof by the Purchaser or the Company, will infringe any patent or other proprietary rights of any third party and the Vendor agrees, at its sole cost and expense, to indemnify, defend and save harmless the Purchaser and the Company from and against all losses, costs, expenses or damages arising or incurred as a result of any such infringement or alleged infringement in the use or sale of the Goods and/or Work, except such of the Goods as are manufactured in accordance with the Purchaser's own specific design unless such design originated from or was proposed or advised by the Vendor.

**ARTICLE 18 – INDEMNITY**

The Vendor shall indemnify and hold harmless the Purchaser and/or the Company from and against all liabilities, claims, costs for personal injury (including death) or property or other damage arising out of acts or omissions of the Vendor or its employees, suppliers, or agents or arising out of any defect in the Goods and/or Work supplied by the Vendor pursuant to the Contract.



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Virgo Valves & Controls Private Limited  
St. No. 27/27B, Telecom Indl. Park, Phase  
Village Maatu, Haridwar, Pune - 411 7

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**ARTICLE 19 – LIENS**

The Supplier shall protect indemnity and keep the Purchaser and the Company harmless at all times from and against any and all liabilities for payment of the amount of any liens claimed by any of the Supplier’s Sub-vendors/Sub-contractors or for materials, in connection with the Supplier’s supply.

If at any time the Purchaser and/or the Company receive notice of any such lien or claim thereof which would constitute a legal charge upon the Purchaser’s property and/or the Company’s property. The Purchaser and/or the Company shall forthwith inform the Supplier.

In case the Supplier fails to pay or does not satisfy such claim within a period of fifteen days after receipt of such notice, the Purchaser shall have the right to deduct and retain a sum out of any payment due by the Purchaser to the Supplier until such lien or claim is paid discharged or released.

**ARTICLE 20 – SECRECY, CONFIDENTIALITY AND PUBLICITY**

All specifications, designs, drawings, data and other information (collectively called the "Information") furnished by the Purchaser shall be used by the Vendor only for the purposes of fulfilling its obligations under the Contract and for no other purpose. The Information shall be kept confidential save where the Vendor proves, to the Purchaser’s satisfaction, that any such Information is available to the public or was already in its lawful possession at the time such Information was furnished to the Vendor or was rightfully received from a third party subject to no secrecy obligation. This obligation of secrecy shall survive any termination of the Contract and shall valid until 15 years from completion of Work

The Vendor shall not make news releases or issue other advertising pertaining to the Contract without first obtaining the written approval of the Purchaser.

**ARTICLE 21 – CONSEQUENTIAL DAMAGES**

Neither Party shall be liable to the other Party in contract, tort, warranty, strict liability or any other legal theory for any indirect, consequential, incidental, punitive or exemplary damages or loss of profit, production or any contract, other than under Article 12 and Article 17.

This Article shall not limit liability in any case of fraud, deliberate default or reckless misconduct by the defaulting Party.

**ARTICLE 22 – NON-WAIVER**

Nothing herein shall be construed as limiting the Purchaser’s rights otherwise provided by Law. The Purchaser’s delay or failure to enforce any of its rights hereunder shall not be considered a waiver of such rights by the Purchaser whether as to that occasion or any subsequent occasion unless the Purchaser expressly stipulates such in writing.

**ARTICLE 23 – ARBITRATION**

All disputes, controversies or differences which may arise between the Parties, out of or in relation to or in connection with the Contract, or any breach, validity or termination thereof, shall be finally settled by arbitration in Republic of Korea, in accordance with the latest Rules of Arbitration of the International Chamber of Commerce. The award rendered by such arbitration shall be final and binding upon the Parties thereto, without any right of appeal therefrom.



*Mrs*  
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**ARTICLE 24 – SPARE PARTS (N/A)**

**ARTICLE 25 – CORRESPONDENCE**

All correspondence, specifications, drawings, or other papers shall bear the following references :- :

- Name of FACILITIES and location
- Symbol or code of FACILITIES
- Purchaser's Quotation request or contract number
- Equipment plant tag numbers, if any
- Purchaser Contract number

and shall be addressed to the personnel detailed in Annex 3 to this agreement:

**ARTICLE 26 – GENERAL DESIGN OBLIGAION**

26.1 The Supplier shall be deemed to have scrutinized, prior to the date of Contract, the Purchaser's Requirements (including design criteria and calculations, if any). The Supplier shall be responsible for the design of;

- The Equipment; and
- Such other elements of the Goods as are indicated in the Purchaser's Requirements to fall within the scope of the Supplier's responsibility.

And takes full responsibility for the accuracy of such Purchaser's Requirements for such purpose (including design criteria and calculations), except as stated in Article 26.3 below.

26.2 The Purchaser shall not be responsible for any error, inaccuracy or omission of any kind in the Purchaser's Requirements as originally included in the Contract and shall not be deemed to have given any representation of accuracy or completeness of any data or information, except as stated in Article 26.3 below. Any data or information received by the Purchaser, from the Purchaser or otherwise, shall not relieve the Supplier from responsibility for the performance of the Services and the design of the Goods (to the extent the Supplier is responsible for the design of the Facility under the Contract).

26.3 The Purchaser shall be responsible for the correctness of the information expressly identified as "rely upon information" in the Purchaser's Requirements.

**ARTICLE 27 – DOCUMENTATION**

The Vendor shall, at its own cost and expense and by courier and/or by electronic way of transmission to be specified in the Contract, furnish the Purchaser with all Documents at the times and in the type and number of copies stipulated in the Contract or as requested by the Purchaser from time to time. The Vendor shall submit the requested documentation according to the schedule agreed in the Exhibit C.

It is understood that the documentation issued by the Vendor for approval is subject to Purchaser's comments.

Purchaser's comments and/or approval of Vendor's Documents shall not relieve Vendor from his liability as for the material selection, the design, the sizing, the reliability and the stability checks of the supplied Goods and/or the performed Work.



*M.M.*  
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Except for such Documents as have existed already and considered proprietary, title to all Documents specifically prepared and furnished by the Vendor under the Contract and intellectual property rights therein shall vest in the Purchaser and/or the Company, and the Purchaser and/or the Company shall have the right to use all Documents supplied under the Contract without restriction whatsoever.

**ARTICLE 28 – PROGRESS REPORT**

Within four (4) weeks from the signing date of the Contract, the Supplier shall submit the Purchaser its program for the manufacturing of the goods so as to meet the delivery date laid down in EXHIBIT B.

Thereafter, on the twentieth (20th) day of every month until the delivery of Equipment Package(s), the supplier shall submit to the purchaser a progress report including, but not limited to;

- Progress Table
- Unpriced copies of main sub-orders
- Photo(s) related Scope of Work, such as sub-order stocking, major step of manufacturing, etc.
- the stage reached in the manufacture of the goods
- any discrepancy(slippage) between the reached in the manufacture of the goods and the program provided pursuant to above clause
- the reason for any slippage in the manufacturing program
- the action the Supplier proposes to take to correct any slippage in the manufacturing program list of main documents issued area of concerns (Purchaser's job no. / tag no. shall be identified for any documents in aforementioned progress report)

**ARTICLE 29 – SCHEDULING**

Within 30 days from the effective date of the Purchase Order, the Supplier shall send the Purchaser a detailed schedule of the design, manufacturing, testing and delivery activity.

This schedule shall include a list of main sub-orders the Supplier expects to place and their date of issue.

Any variations or modifications to such schedule shall be notified to the Purchaser as they become known.

Copy of all main un-priced sub-orders shall be kept at the disposal of the Purchaser's inspectors and of the Company in the Supplier's offices for checking or taking off.

The Purchaser shall have the right to request one copy of all main un-priced sub-orders.

**ARTICLE 30 – EXPEDITING**

Whenever any actual or potential cause delays or threatens to delay the supply of the Goods and/or performance of any of the Work under the Contract, the Vendor shall immediately so notify the Purchaser in writing giving full details thereof and shall take such measures at its own cost as the Purchaser may approve or instruct to minimize or eliminate the delay.

The Purchaser shall have the right to take whatever action it feels necessary for expediting arranging for the Work to be carried out at the Vendor's or any of its Sub-Vendors, plants or



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 Image Man, Indira Nagar - 411 057

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elsewhere by any other party at the Vendor's expense. The Purchaser or its representative shall be allowed reasonable access to the Vendor's plant, and those of its Sub-Vendors, for such expediting purposes.

The Vendor shall supply schedules and progress reports for the Purchaser's use in expediting as required by the Purchaser, and shall render all other assistance deemed necessary by the Purchaser.

In addition to above, Company may also perform the expediting activities and Vendor shall provide all the necessary support and assistance to Company.

**ARTICLE 31 – TEST AND INSPECTION**

Notwithstanding the provisions in any Procedure, the Company and/or the Purchaser reserve the right to witness with their own inspectors and/or appointed by them, in the Supplier's and/or Sub-vendor's Shop, the checks and tests required by the Purchase Order and/or by Technical Specifications. Witness tests to define within the early stage of the project after PO effective date.

The Purchaser and/or the Company may at any time designate any Third Party Inspector or Agency to act on its behalf subject to prior notice.

The Purchaser and/or the Company may also carry out inspections during the progress of the order to follow up the most important phases of design and manufacture and this shall not be considered as a reason of delay for interference in the production.

The Supplier shall establish and submit detailed "Inspection and Test Plans" (ITPs) to the Purchaser for Approval and mark-up of the Purchaser and the Company on inspection witness points according to the applicable specifications. It will be the Purchaser's right to ask the Supplier for a "Pre-inspection Meeting" in order to discuss Vendor's quality control procedures, the detailed ITPs, the requirement for the test, communication channels, the Vendor's organization and the Vendor's system for Sub-vendors etc.

Activities for the Shop Inspection and Test include the following;

- Vendor's Test : Tests and inspections conducted by the Vendor at the place of manufacture or the Vendor's Shop.
- Purchaser's Witness : Witnessing, monitoring or inspection by the Purchaser of the Vendor's tests.
- Company's Witness : Witnessing, monitoring or inspection by the Purchaser of the Vendor's tests.
- Purchaser's Review : Review or examination by the Purchaser of relevant records, data and any other supporting documents received from the Vendor relating to the results of the Vendor's tests.

The items of the materials and equipment and extent of inspection for them which are subject to the Shop Inspection shall be in accordance with relevant Technical Documents and/or Specifications, other Codes and Standards of the Contract and the Vendor's QC plan / Shop Inspection and Test Plan as approved by the Company and/or the Purchaser.

The Supplier shall notify the Purchaser the place and time of witness test/inspection in writing only, at least 2 weeks before the date established for the testing and/or checking.

The Purchaser will inform the Supplier in writing of the intension of Purchaser's, Third Party Agency's and/or the Company's witness or waiver by five (5) days prior notice.



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Majra Mehar, Mohiwallah, Punjab - 141 101

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Any waiver of tests and/or checks witnessing shall be notified to the Supplier in writing only. In this case, the Supplier shall provide to carry out the checks and tests required, informing the Purchaser about the final result, said results shall be as jointly verified.

Inspections or witnessing by the Purchaser and/or the Company, or failure to inspect or witness, shall not be construed as acceptance of any part of the Work nor as relieving the Supplier of its responsibility for any part of the Work complying with the requirements of the Contract and being free from defects in material and workmanship and capable of performing their respective functions.

Any costs of checks, inspections and tests, preparation of the relevant documentation, issuance of analysis, check certificates by qualified laboratories and re-tests shall be borne by the Supplier. In the event that the Purchaser's inspectors and/or the Company's representative cannot inspect the Equipment Package(s) or any part of Supply due to the fault of the Supplier, the Supplier shall bear all associated costs in respect of the Purchaser's inspectors and/or the Company's representative for any repeat test.

Inspections may be extended to cover packing and marking.

The Supplier shall dispatch to the Purchaser the following documentation:

- No.1 original of Quality Records Dossier Index to be submitted for approval at the time of the Pre Inspection Meeting (PIM) or 60 days in advance to the final inspection when Pre-inspection Meeting is not foreseen
- the copies of all the Vendor's test reports within two (2) weeks after the test
- the number of original, electronic file plus copies of Quality Records Dossier in accordance with EXHIBIT C and the Technical Specifications.

Above documents and files shall be delivered to the Purchaser's Project Team in Seoul / the Purchaser's Site Office in UAE.

If the Purchaser has witnessed the Vendor's test and received satisfactory reports and any punch clearance completion, then the Purchaser shall issue an "Inspection Release Certificate for Shipping Release" as per the format given in EXHIBIT C, Shop Inspection Procedure (if any), authorizing the Vendor to proceed with shipment of Equipment Package(s).

Should Purchaser deem the identification of the Goods to be incorrect or inadequate, the Vendor shall prove, at his own care and cost, the correct identification and any punch clearance in the presence of Purchaser.

Goods will be dispatched / shipped only after final release certificate by Purchaser.

**ARTICLE 32 – VENDOR'S ORGANIZATION**

**32.1 Vendor's Organization and Resource**



In order to ensure the complete performance of the Work in accordance with the Delivery Schedule, from the commencement of the Work to its completion, the Supplier shall fully adapt his organization for each specific phase of the Work to fulfill all Contract requirements and accordingly shall mobilize, develop and maintain the overall functional organization and corresponding resources, including when, where and how.

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Village Maan, Hinjewadi, Pune - 411 057



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necessary by providing additional means.

**32.2 Supplier's Representative**

The Supplier shall appoint and keep assigned to the Work during the entire course of the work, an experienced Supplier's representative acceptable to the Purchaser who shall be fully knowledgeable in all aspects of the Contract and Work and have full charge of all operations of the Supplier in respect of the Work and full authority to represent on behalf of Supplier in all matters related to the performance of the Contract. Such authority shall include the power to agree on behalf of the Supplier to any modification to the Work. Any communications or notice given to the Supplier's representative by the Purchaser shall be considered as given to the Supplier. The Supplier's representative shall fully cooperate with the Purchaser representative,

- in notifying the Purchaser as soon as he becomes aware of any matter affecting the performance of the Work and the realization of the Equipment Package, and which may result in increasing the Contract Price and/or delaying Delivery Schedule, and
- in making and considering proposals aimed at avoiding or reducing the sequences of the above notified matters.

**ARTICLE 33 – WARRANTY**

33.1 All the Goods furnished pursuant to the Contract and/or the Work performed are guaranteed to be new, unused and of the best quality obtainable (unless otherwise authorized by the Purchaser), to conform in all respects to the Contract, to be free from faulty design, workmanship or Goods and/or Work, to comply with all applicable legal requirements or other regulations commonly accepted in the industry, and to be of sufficient size and capacity so as to fulfil in all respects any operating conditions specified in the Contract.

The warranty period shall be twelve (12) months from the date of issue of the Provisional Acceptance Certificate issued by Company (Expected PAC date: September 17th, 2017).

If any damage or defect in the Goods and/or Work is notified by the Purchaser on or before the expiry date of the warranty period under this Article, the Vendor shall, at its own cost and expense and as promptly as possible thereafter, make all alterations, repairs and replacements as may be necessary for the Goods and/or Work to function in accordance with the Contract and to fulfil the foregoing warranties.

Should the Vendor fail to correct or to commence and diligently proceed with taking appropriate actions to correct the defective Goods and/or Work within a reasonable time of being called upon to do so, the Purchaser may, at its option, remove and correct (whether by repair or replacement) such defective Goods and/or Work at the Vendor's expense. The Purchaser may, however, at its option, elect to accept the defective Goods and/or Work with an adjustment in the Contract Price. If, pursuant to the above warranties, the Vendor alters, repairs or replaces any defective Goods and/or Work, the provisions of this Article shall then apply to such altered, repaired or replaced Goods and/or Work for a period of two (2) years from the date on such alterations, repairs or replacements were completed.

Notwithstanding the above, in case of an emergency or any HSE related issue, the Purchaser shall have the right to remedy the defect by itself or have it remedied by



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third party(ies) at the Vendor's expense.

If Vendor fails his guarantee obligations within reasonable time from Purchaser's notice, Purchaser reserves the right to take directly all corrective actions to make-good the Goods and/or Work according to the Contract requirements. All relevant costs will be on Vendor's account and Vendor will be back charged for them.

**33.2 Performance guarantee**

Vendor warrants that the performance of the supplied Goods and/or performed Work will comply with the technical specifications included in the Contract.

Without limitation to any other provisions eventually included in the Contract, the Performance Tests will be carried out at Site after the installation of Goods.

If the performances achieved during the Performance Test are not sufficient for reasons attributable to the Vendor, Purchaser will notify in writing Vendor of such unsatisfactory performances and Vendor shall commence to remedy the default as soon as practicable and in the shortest possible time from notice unless otherwise agreed.

If any of such default is not so remedied, the Purchaser has the right either to take corrective actions to make-good the supply according to the Contract requirements and all relevant costs there from will be on Vendor's account and Vendor will be back charged for them, or to reject the equipment as well as to obtain a full reimbursement of paid amounts thereto.

**ARTICLE 34 - TRANSFER OF VENDOR WARRANTY TO THE COMPANY**

The Vendor and the Purchaser understand that the Purchaser is contracting with the Vendor for the purchase of Goods and performance of Work for ultimate transfer to and use by the COMPANY.

Therefore, the Vendor agrees that, in any event, all rights of the Purchaser for any failure of the Goods and/or Work to meet specifications or of any other breach of warranty provided for shall run to the benefit of and be fully enforceable by the Company and the Purchaser either jointly or severally.

**ARTICLE 35 - TECHNICAL COOPERATION – JOINT RESPONSIBILITY (N/A)**

**ARTICLE 36 – INTERPRETATION OF TRADE TERMS**

The interpretation of trade terms in the Contract shall be in accordance with INCOTERMS (International Rules for the Interpretation of Trade Terms) published by the International Chamber of Commerce in year 2010 (Incoterms 2010 Edition, ICC Publication No. 715) and any supplements thereto in existence at the date of issuance of the Contract.

**ARTICLE 37 – CONTRACT PRICE**

37.1 As a full compensation for the Work, Purchaser shall pay to Vendor the Contract Price detailed in EXHIBIT A on the lump sum basis.

37.2 The Contract Price shall be fixed and not subject to any adjustment.



*Virgo Vastres & Controls Private Limited*  
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Village Maan, Hingewadi, Pune - 411 057

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that the Contract Price given in the Contract fully cover prices escalation, if any, due to changing costs as arising out of the market conditions, such as but not limited to, Goods and/or Work costs, labour costs and currency fluctuation. The Price shall not be subject to any escalation or increase as a result of any increase in Vendor's costs.

- 37.3 The Contract Price shall be deemed to include and cover all costs, expenses and liabilities of every description and the risks of all possibilities of delay and interference which may occur in connection with the performance of the Work and handing over the Goods by Vendor to Purchaser
- 37.4 Unless otherwise provided in writing in the Contract, Vendor shall pay all of the sales, use, service, excise and other taxes as well as all duties, fees or other assessments of whatever nature imposed by governmental authorities, applicable in connection with the Contract.
- 37.5 All handling cost as well as all charges for containers (if any), packing crating, insurance and transportation, on or before handing over to Purchaser, shall be covered in the Contract Price.
- 37.6 All costs and expenses for Vendor's agent shall be included in Contract Price and be paid by the Vendor.
- 37.7 Contract Price must include any related amount to duty drawback. Supplier should proceed to duty drawback directly against public agencies such as custom office and so on. Even if supplier is not able to refund the duty, supplier cannot ask about the settlement for amount of loss to buyer.

**ARTICLE 38 – TAXES AND DUTIES**

The Vendor shall provide and pay for all necessary licenses, fees, taxes, duties and levies imposed in the country(ies), of manufacture and/or delivery in respect of the supply of the Goods and/or the performance of the Work stated in this Contract so that the price or any part thereof is not increased due to any or all of these factors.

In case, the Goods in this Purchase Order is exempted from customs duty of the United Arab Emirates in order to prepare relevant documents regarding customs duty exemption the Vendor shall provide all of information and documents to the Purchaser.

**ARTICLE 39 – TERMS OF PAYMENT AND INVOICING**

See Annex 4

**ARTICLE 40 – BANK GUARANTEES**

The Supplier shall furnish the Contractor with Bank Guarantees issued by a first class bank acceptable to the Contractor as follows:

Performance/Warranty Bank Guarantee: Ten (10) percentage of the Contract Price. Such Guarantees shall be valid from PO until of the delivery date specified in EXHIBIT B plus one (1) month and valid until the warranty period specified in ARTICLE 33, plus one (1) month.

Guarantee shall be in the form of an unconditional and irrevocable bank guarantee that shall allow immediate payment at sight against simple request by the Contractor that states that the Supplier has not complied with the terms of the Contract. The Contractor's request shall not require any substantiation thereof.



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Original of bank guarantee to be submitted by the Supplier shall be advised to the Contractor through any bank in Korea and original of bank guarantee delivered by airmail shall not be accepted effectively.

The said bank guarantee is subject to the Contractor's approval and wording of said Guarantee is as per the specimen in the ANNEX 2

**ARTICLE 41 – PACKING AND MARKING**

The Packing & Marking of the Equipment packages(s) covered by this Purchase Order must be in accordance with the provision of the Purchaser order and "Shipping & Packing Instructions" as specified in the EXHIBIT C as a minimum requirement. Any deviations from the above instructions and specifications must be approved by the Purchaser in writing.

The cost of all packing, boxing and/or crating, carriage etc. shall be deemed to be included in the Contract price. The protection and packing are deemed to be non-returnable. Materials delivered in error or in excess of the quantity called for, may at Purchaser's option, be returned to the Supplier at the Supplier's expense.

Packing shall be capable of withstanding all hazards normally encountered during transport in the manner stipulated in the Purchase Order, including loading and unloading operations whether by crane and/or by sliding off; furthermore it shall protect goods from weather conditions be it or not specifically required in the Purchase Order.

The Supplier shall also be responsible for any damage to the equipment caused by:

- bad or ineffective packing or deterioration / corrosion as a result of incorrect or inadequate protection during transportation and storage not exceeding the period of time stated in the Contract
- corrosion as a result of the Supplier's failure to indicate storage recommendations
- loading or unloading resulting from the Supplier's failure to provide any or adequate instructions

Each package shall include the necessary copies of the packing list to identify the contents by the Purchaser at site in an appropriate manner.

The Supplier shall provide the Purchaser with proper lifting beam to handle of the equipment for loading, unloading and erection at Site.

**ARTICLE 42 – INSTRUCTIONS AND DOCUMENTS FOR SHIPPING**

Refer to the ANNEX 5 and further information will be followed during the execution stage.

**ARTICLE 43 – NON OBJECTION OF SUPPLIER'S LOCAL AGENT**

Purchaser has directly contracted the supply of the goods covering this Purchase Order, with Supplier. Supplier shall manage the Supplier's local agent in U.A.E, not to have any objection against Goods' import and this Contract, by Purchaser. Supplier indemnifies and holds harmless Purchaser in respect of Goods' import, Custom clearance and any other scopes in this Contract, from the Supplier's local agent in U.A.E. All delay issues and demurrage in U.A.E port, incurred by Supplier's local agent, shall be Supplier's responsibility and/or responsibilities.



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Refer to the Annex 7 Non Objection Letter from Supplier's local agent in U.A.E.



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SARB #4 - SATAH AL RAZBOOT, FIELD DEVELOPMENT PROJECT, PACKAGE A

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PROJECT



**SUPPLY CONTRACT/PURCHASE ORDER**

In witness whereof this Supply Agreement has been executed as a deed by the representatives of the Parties the day and year first above written.

For and on behalf of  
Purchaser

For and on behalf of  
Supplier

  
  
Name : Hae-Jin, Lee  
Title : Deputy General Manager  
Procurement Division  
Hyundai Engineering & Construction Co., Ltd.

  
Name : Bhavesh Manek  
Title : Sr. General Manager

**Virgo Valves & Controls Private Limited**  
Sr.No.277/278, Raisoni Indt. Park, Phase II,  
Village Maan, Hinjewadi, Pune - 411 057



SARB  
EPC PKG #4  
PROJECT



SUPPLY CONTRACT/PURCHASE ORDER

ANNEX 1

FORM OF BANK GUARANTEE

\_\_\_\_\_ [Bank's Name, and Address of Issuing Branch or Office]

Beneficiary: \_\_\_\_\_ [Name and Address of the Contractor]

Date: \_\_\_\_\_

Bank Guarantee No.: \_\_\_\_\_

We have been informed that \_\_\_\_\_ [name of Subcontractor] (hereinafter called "the Subcontractor") has entered into Subcontract No. \_\_\_\_\_ [reference number of the subcontract] dated \_\_\_\_\_ with you, for the execution of \_\_\_\_\_ [name of contract and brief description of Works] (hereinafter called "the Subcontract").

Furthermore, we understand that, according to the conditions of the Subcontract, a performance guarantee is required.

We \_\_\_\_\_ [name of Bank] hereby irrevocably and unconditionally guarantee and undertake to pay immediately you any sum or sums not exceeding in total an amount of \_\_\_\_\_ [amount in figures] ( \_\_\_\_\_ ) [amount in words], such sum being payable in the types and proportions of currencies in which the Subcontract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Subcontractor is in breach of its obligation(s) under the Subcontract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the .... Day of ..... and any demand for payment under it must be received by us at this office on or before that date, unless extended by the Subcontractor.

This guarantee shall be governed by and interpreted under the laws of [ \_\_\_\_\_ ]

\_\_\_\_\_ [signature(s)]



*MKB*  
**Virgo Valves & Controls Private Limited**  
Sr. No. 277/278, Panchsheel Park, Phase II  
Village Maan, Hyderabad, India - 411 05

SARB  
EPC PKG #4  
PROJECT



SUPPLY CONTRACT/PURCHASE ORDER

ANNEX 2

CORRESPONDENCE ADDRESS

All-commercial correspondence should be submitted to

HYUNDAI ENGINEERING & CONSTRUCTION CO. LTD.  
Hyundai Bldg. 75, Yulgok-ro, Jongno-gu  
Seoul, Korea  
Postal Code : 110-920

SATAH AL RAZBOOT FIELD DEVELOPMENT PROJECT – EPC PACKAGE 4  
Mr. S.G. Roh / Project Procurement Manager  
Tel: +82-2-6031-0327, Fax : +82-2-6031-0399  
E-mail : sgroh2050@hdec.co.kr, sarb\_ppm@hdec.co.kr

If the correspondence is concerned about commercial matters, it should be forwarded to:

for the attention of

Mr. H. J. Lee / Deputy General Manager  
Tel. : +82-2-746-2796, Fax : +82-2-746-3121  
E-Mail : hagiri@hdec.co.kr

And

a copy of the correspondence

Mr. Y. W. Jeong / Assistant Manager  
Tel. : +82-2-746-4370, Fax : +82-2-746-3121  
E-Mail : ywjeong@hdec.co.kr

If the correspondence is concerned about technical matters, a copy of the correspondence should be forwarded to:

for the attention of

Mr. J. K. Jeong / Manager  
Tel: +82-2-6031-0328, Fax : +82-2-6031-0399  
E-mail : jinkwang.jeong@hdec.co.kr

And

a copy of the correspondence

Mr. S.G. Roh / Project Procurement Manager  
Tel: +82-2-6031-0327, Fax : +82-2-6031-0399  
E-mail : sgroh2050@hdec.co.kr, sarb\_ppm@hdec.co



*Virgo Valves & Controls Private Limited*  
Sr. No. 27/270, Rajesh Ind. Park, Phase II,  
Village Maan, Hinjewadi, Pune - 411 057



SARB  
EPC PKG #4  
PROJECT



SUPPLY CONTRACT/PURCHASE ORDER

ANNEX 3

Terms of Payment

1. Five (5) percent of the Contract Price shall be paid by means of Telegraphic Transfer within thirty (30) days against the following documents:
  - a) Commercial Invoice (1 original + 2 copies)
  - b) Advance Payment Bank Guarantee (1 original + 2 copies)
  - c) Performance Bank Guarantee (1 original + 2 copies)
  
2. Ten (10) percent of the Contract Price shall be paid by means of Telegraphic Transfer within thirty (30) days against the following documents:
  - a) Commercial Invoice (1 original + 2 copies)
  - b) Certificate of approval for major vendor document by the Purchaser (1 original + 2 copies),  
*Certificate of approval in code 2 for major vendor document by purchaser.*
  
3. Ten (10) percent of the Contract Price shall be paid by means of Telegraphic Transfer within thirty (30) days against the following documents:
  - a) Commercial Invoice (1 original + 2 copies)
  - b) Certificate that the Supplier has received major materials at Supplier's shop with photos Body, Body Closures) (1 original + 2 copies) *(In maximum 7 to 8 lots)*
  
4. Sixty-Five (65) percent of the Contract Price shall be paid by means of Transfer within thirty (30) days against the following documents:
  - a) Commercial invoice (1 original + 2 copies)
  - b) Signed Packing List (1 original + 2 copies)
  - c) Clean on Board Bill of Lading (1 original + 2 copies) or FCR
  - d) Certificate of Origin (1 original + 2 copies)
  - e) Inspection Release Certificate signed by the Purchaser or inspector designated by the Purchaser (1 original + 2 copies)
  
5. Ten (10) percent of the Contract Price shall be paid by means of Telegraphic Transfer within thirty (30) days against the following documents:
  - a) Commercial invoice (1 original + 2 copies)
  - b) Certificates that final documents such as manufacturing data book have been approved by the Purchaser
  - c) Warranty Bank Guarantee (1 original + 2 copies)



*1x2*  
**Virgo Valves & Controls Private Limited**  
Sr. No. 277/278, Patisori Incl. Park, Phase II,  
Village Maan, Hinjewadi, Pune - 411 057

SARB #4 - SATANAJ BAZAR POOL FIELD DEVELOPMENT PROJECT PACKAGE A

SARB  
EPC PKG #4  
PROJECT



**SUPPLY CONTRACT/PURCHASE ORDER**

**Invoicing Instructions**

Commercial invoice shall be made out in the name of ;

Hyundai Engineering & Construction Co., Ltd.

Hyundai Annex Building  
75, Yulgok-ro, Jongno-gu, Seoul, Korea, Postal Code: 110-920  
Procurement Office

and shall always include ;

- the reference to the Contract
- the final destination of the materials
- the detail of the L/C opened by the Purchaser (if the payment method is L/C.)
- if the materials are "balance" or "partial" delivery
- gross and net weight of the invoiced goods
- actual net amount to be paid, deducting pro-rata advance and progress amounts already invoiced, if any.

**Forwarding of Documents**

The documents for payment shall be issue in the specified language and forwarded with registered letter to:

Hyundai Annex Building  
75, Yulgok-ro, Jongno-gu, Seoul, Korea, Postal Code: 110-920  
Procurement Office



*M/S*  
**Virgo Valves & Controls Private Limited**  
Sr.No.277/273, Panchaj Inel. Park, Phase II,  
Village Madan, Mahipalpur, Gurgaon - 411 057

SARB #4 - SATORAJI, RAZBOOT, FIELD DEVELOPMENT PROJECT PACKAGE A



SARB  
EPC PKG #4  
PROJECT

SUPPLY CONTRACT/PURCHASE ORDER

ANNEX 4

SHIPPING INFORMATION

[PERMANENT MATERIAL/GOODS]

1. CONSIGNEE :

ABU DHABI MARINE OPERATING COMPANY, LTD (ADMA-OPCO)  
BANI YAS NAJDA STREET 6TH  
ADMA TOWER  
P. O. BOX 303  
ABU DHABI, U.A.E.

2. NOTIFY PARTY :

HYUNDAI ENGINEERING & CONSTRUCTION CO. LTD. (HDEC)  
SATAH AL RAZBOOT(SARB) FIELD DEVELOPMENT PROJECT  
EPC PACKAGE 4 : PLANT FACILITIES CONTRACT No. 160597  
P.O. BOX 46101  
ABU DHABI, U.A.E  
Tel : +971-2-6432865  
Fax: +971-2-6432928  
Attn : TBD  
Mobile : TBD

"NOMINATED CLEARING AGENT/FORWARDER'S CONTACT DETAILS TO BE ADDED"

(Note)

All shipping documents should be sent to notify party by courier service with notice

3. SHIPPING MARK



ABU DHABI MARINE OPERATING COMPANY, LTD (ADMA-OPCO)  
C/O HYUNDAI ENGINEERING & CONSTRUCTION CO., LTD. (HDEC)  
SATAH AL RAZBOOT(SARB) FIELD DEVELOPMENT PROJECT  
EPC PACKAGE 4 : PLANT FACILITIES CONTRACT No. 160597  
P.O BOX 46101, ABU DHABI, U.A.E  
PURCHASE ORDER NO.:  
MANUFACTURER:  
COUNTRY OF ORIGIN:  
DESCRIPTION:  
EQUIPMENT NO.:  
PACKAGE NO.:  
GROSS WEIGHT: (in Kg)  
NET WEIGHT: (in Kg)  
DIMENSION (LXWXH): (in M)  
PORT OF DESTINATION: MINA, ZAYED, UAE  
FINAL DESTINATION : MUSAFFAH, ABU DHABI, UAE

(Note)

Shipping mark should be attached to 3 sides of the package and, one of them shall be on the top and the others shall be on the wider sides



Virgo Valves & Controls Private Limited  
Sr. No. 2777278, Phase II, Park, Phase II,  
Village Maan, Hyderabad - 411 057

SARB #4 - SATAH AL RAZBOOT FIELD DEVELOPMENT PROJECT PACKAGE 4

SARB  
EPC PKG #4  
PROJECT



SUPPLY CONTRACT/PURCHASE ORDER

4. Required No./Kinds of Shipping Documents for Customs Clearance.

• Bill of Lading or Airwaybill or Truckwaybill	: Original 2 , Copy 3
• Commercial Invoice (Custom Purpose Invoice) ,certified by chamber of commerce at loading country	: Original 2 , Copy 3
• Packing List	: Original 2 , Copy 3
• Certificate of Origin ,certified by chamber of commerce at loading country	: Original 2 , Copy 3

(Note)

- 1) CLEAN ON BOARD BILL OF LADING (B/L) or SEAWAY BILL or AIR WAY BILL (AWB) or Full set of CONSIGNMENT NOTE (TRUCK WAY BILL, if by Road)
- 2) CUSTOM PURPOSE INVOICE (Certified by the Chamber of Commerce at loading country) (DULY SIGNED AND STAMPED IN HDEC LETTER HEAD or VENDOR LETTER HEAD STATING CIF VALUE)
  - Invoice currency must be USD.
- 3) Certificate of origin should be certified by chamber of commerce at loading country. Any certificate of origin issued/certified/legalized by any country other than loading country is not accepted by U.A.E customs. (Very Important)
- 4) PORT OF DESTINATION – four(4) ports will be utilized
  - MINA ZAYED PORT, ABU DHABI, UAE
  - KHALIFA PORT, ABU DHABI, UAE
  - MUSAFFAH PORT, ABU DHABI, UAE
  - ABU DHABI AIRPORT, UAE

(Note)  
Port of Destination will be informed prior to every shipment, by HDEC.
- 5) FINAL DESTINATION : MUSAFFAH, ABU DHABI, UAE (To be confirmed by, later)

5. Other indispensable things to be reflected on shipping documents

- 1) Commercial invoice: Each invoice should contain the following information
  - P/O no, shipping mark, quantity/unit price of each item shipped, total amount of each item, shipping term (Incoterms 2010), complete material description for each item, harmonized system code(HS Code) (very important) and county of origin(very important)
  - The wording of such as " Value for customs purpose", Non Commercial Value " and " Free of charge" should be omitted, "Zero Value" and/or "Discount" should not be declared on any shipping item whatsoever
  - Invoice basically to be on vendor's letter head form & duly signed/dated/stamped
  - Invoice must be typewritten and contains the following statement;



**Virgo Valves & Controls Pvt. Ltd.**  
 Virgo Valves & Controls Pvt. Ltd. Phase II,  
 Plot No. 27/1/273, Poonam Nagar,  
 Bangalore - 560025, India. Phone: +91 80 411 057

SARB #4 - SATAJ AL RAZBOOT FIELD DEVELOPMENT PROJECT PACKAGE A

SARB  
EPC PKG #4  
PROJECT



## SUPPLY CONTRACT/PURCHASE ORDER

"We hereby declare that the prices states above are the current export markets prices. (Country of Origin)  
"SIGNED BY" (Signature) – full name". With company seal

→ Stamping signature is not allowed.

- 2) Packing list: Each packing list should contain the following information
  - P/O no, Shipping Mark, Quantity of Each Item Packed, Complete Material Description, Net/Gross Weight(in Kgs) of each Box/Case/Package, Dimension of each Box/Case/Package in Centimeter or Meter, Total Number of Package, Total Net/Gross Weight in Kilos, Packing Style of Each Package
  - Packing list basically to be on vendor's letterhead form duly signed/dated.
- 3) Consignee/Notify Party/Shipping Mark
  - Consignee, Notify Party, Shipping Mark should be described on all shipping documents(Bill of Lading/Airwaybill, Commercial Invoice, Packing List and Certificate of Origin)
- 4) Shipper
  - Shipment from Korea: Hyundai Engineering & Construction or Actual shipper
  - Shipment from other countries (Europe ,USA, Asia, etc.) except for the shipment from Korea: Actual shipper



**Virgo Valves & Controls Private Limited**  
Sr. No. 277/278, Raiconi Incl. Park, Phase II,  
Village Maan, Hingewadi, Pune - 411 057

SARB #4 – SARAH A, RAZBOOL FIELD DEVELOPMENT PROJECT PACKAGE A

SARB  
EPC PKG #4  
PROJECT



SUPPLY CONTRACT/PURCHASE ORDER

[TEMPORARY MATERIAL/GOODS]

1. CONSIGNEE :

HYUNDAI ENGINEERING & CONSTRUCTION CO. LTD.  
SATAH AL RAZBOOT(SARB) FIELD DEVELOPMENT PROJECT  
EPC PACKAGE 4 : PLANT FACILITIES CONTRACT No. 160597  
P.O. BOX 46101  
ABU DHABI, U.A.E  
Attn : TBD  
Mobile : TBD

2. NOTIFY PARTY :

SAME AS CONSIGNEE

(Note)

All shipping documents should be sent to notify party by courier service with notice

3. SHIPPING MARK



ABU DHABI MARINE OPERATING COMPANY, LTD (ADMA-OPCO)  
C/O HYUNDAI ENGINEERING & CONSTRUCTION CO., LTD. (HDEC)  
SATAH AL RAZBOOT(SARB) FIELD DEVELOPMENT PROJECT  
EPC PACKAGE 4 : PLANT FACILITIES CONTRACT No. 160597  
P.O BOX 46101, ABU DHABI, U.A.E  
PURCHASE ORDER NO.:  
MANUFACTURER:  
COUNTRY OF ORIGIN:  
DESCRIPTION:  
EQUIPMENT NO.:  
PACKAGE NO.:  
GROSS WEIGHT: (In Kg)  
NET WEIGHT: (In Kg)  
DIMENSION (LXWXH): (In M)  
PORT OF DESTINATION: MINA, ZAYED, UAE  
FINAL DESTINATION : MUSAFFAH, ABU DHABI, UAE

(Note)

Shipping mark should be attached to 3 sides of the package and, one of which shall be on the top and the others shall be on the wider sides

4. Required No./Kinds of Shipping Documents for Customs Clearance.

• Bill of Lading or Airwaybill or Truckwaybill	: Original 2 , Copy 3
• Commercial Invoice (Custom Purpose Invoice) ,certified by chamber of commerce at loading country	: Original 2 , Copy 3
• Packing List	: Original 2 , Copy 3
• Certificate of Origin ,certified by chamber of commerce at loading country	: Original 2 , Copy 3

(Note)

CLEAN ON BOARD BILL OF LADING (B/L)  
or SEAWAY BILL or AIR WAY BILL (AWB) or Full set of CONSIGNMENT NOTES  
(TRUCK WAY BILL, if by Road)



**Virgo Valves & Controls Private Limited**  
St. No. 27/273, Rajahmundry, Park, Phase II,  
Village: Musali, Dist: Rajahmundry, AP 527 007

SARB #4 - SATAH AL RAZBOOT FIELD DEVELOPMENT PROJECT PACKAGE 4

SARB  
EPC PKG #4  
PROJECT



**SUPPLY CONTRACT/PURCHASE ORDER**

- 2) CUSTOM PURPOSE INVOICE (Certified by the Chamber of Commerce at loading country)  
(DULY SIGNED AND STAMPED IN HDEC LETTER HEAD or VENDOR LETTER HEAD STATING CIF VALUE)  
- Invoice currency must be USD.
- 3) Certificate of origin should be certified by chamber of commerce at loading country. Any certificate of origin issued/certified/legalized by any country other than loading country is not accepted by U.A.E customs. (Very Important)
- 4) PORT OF DESTINATION – four(4) ports will be utilized
  - MINA ZAYED PORT, ABU DHABI, UAE
  - KHALIFA PORT, ABU DHABI, UAE
  - MUSAFFAH PORT, ABU DHABI, UAE
  - ABU DHABI AIRPORT, UAE

(Note)  
Port of Destination will be informed prior to every shipment, by HDEC.
- 5) FINAL DESTINATION : MUSAFFAH, ABU DHABI, UAE (To be confirmed by, later)

**5. GENERAL INSTRUCTION FOR CUSTOM CLEARANCE**

- 5) Commercial invoice: Each invoice should contain the following information
  - P/O no, shipping mark, quantity/unit price of each item shipped, total amount of each item, shipping term (Incoterms 2010), complete material description for each item, harmonized system code(HS Code) (very important) and county of origin(very important)
  - The wording of such as " Value for customs purpose", Non Commercial Value " and " Free of charge" should be omitted, "Zero Value" and/or "Discount" should not be declared on any shipping item whatsoever
  - Invoice basically to be on vendor's letter head form & duly signed/dated/stamped
  - Invoice must be typewritten and contains the following statement;
  - As for temporary import for re-export, invoice should contain the following statement

"This shipment is being imported for temporary period and will be re-exported at the end of the project."

- And the description of the equipment should be specified with following details "Model, Manufacturer, Chassis No.(or Serial No.), Engine No. Color, Origin, Mfr'g Year etc."

"We hereby declare that the prices states above are the current export markets prices. (Country of Origin)

"SIGNED BY" (Signature) – full name". With company seal  
→ Stamping signature is not allowed.



**Virgo Valves & Controls Private Limited**  
Sr. No. 277/278, Palsani Ind. Park, Phase II,  
Village Muzan, Hingewadi, Pune - 411 057

SARB  
EPC PKG #4  
PROJECT



**SUPPLY CONTRACT/PURCHASE ORDER**

- 6) Packing list: Each packing list should contain the following information
  - P/O no, Shipping Mark, Quantity of Each Item Packed, Complete Material Description, Net/Gross Weight(in Kgs) of each Box/Case/Package, Dimension of each Box/Case/Package in Centimeter or Meter, Total Number of Package, Total Net/Gross Weight in Kilos, Packing Style of Each Package
  - Packing list basically to be on vendor's letterhead form duly signed/dated.
  
- 7) Consignee/Notify Party/Shipping Mark
  - Consignee, Notify Party, Shipping Mark should be described on all shipping documents(Bill of Lading/Airway bill, Commercial Invoice, Packing List and Certificate of Origin)
  
- 8) Shipper
  - Shipment from Korea: Hyundai Engineering & Construction or Actual shipper
  - Shipment from other countries (Europe ,USA, Asia, etc.) except for the shipment from Korea: Actual shipper



**Virgo Valves & Controls Private Limited**  
 Sr. No. 277278, Rajaraj Park, Phase II,  
 Village Muzh, Bangalore-56, Phone - 411 067