boqsor™

an OGCS product

Unit Rate Contracting for the Oil and Gas Industry

**bill
of
quantities
schedule
of
rates**

OGCS

Oil and Gas Contracts Services

OGCS Global provides a complete Contracts and Supply Chain Management Service, which includes Contracts Engineering, Quantity Surveying, and Project Controls to the Global Energy construction industry, with particular emphasis on the Upstream Oil and Gas sector.

The delivery of these services is system driven with particular emphasis on our flagship software package boqsor™ which is a powerful bill of quantity and unit rate contracting tool.

boqsor™ can be used to support the administration of unit rate contracts throughout their lifecycle phases from initial estimates, bid preparation, tender submission and evaluation, contract award and to monitor and price the work post contract.

Our boqsor™ software package is a Unit Rate Contracting system designed for producing Bill of Quantities and Schedule of Rates specifically for the Oil, Gas and Energy sectors.

It provides a structured method of obtaining reliable fixed price bids where limited design definition is available. Our extensive in-house database of fabrication Quantities, Norms and Pricing information for Onshore and Offshore projects is coupled with pricing data from all major fabrication locations globally including Europe, Gulf of Mexico, Middle East and Asia Pacific.

The system also provides a detailed method of measurement and pricing preambles for each unit rate and boq item. The tender process can then be carried out on modelled information at a very early stage in the design cycle, determining fixed pricing structures with fabricators and providing accurate estimates of outturn fabrication cost.

boqsor™ provides a powerful tender evaluation tool and the ability to run "what if" sensitivity scenarios to evaluate the impact of growth on the relative tenders. As the design develops Quantity information can be updated and replaced throughout the life of the design through to the "as-built" stage. Interfaces between boqsor™ and the design information in CAD can provide a Semi-Automated Measurement process, reducing time and manpower in capturing Quantity Data.

The system provides

- Historical data from previous similar projects on outturn quantities to create model Bills of Quantities and Schedule of Rates for tendering purposes
- A structured method of obtaining reliable fixed price bids where limited design definition is available
- A robust tender evaluation tool that can process and capture large amounts of pricing data from tenders and provide detailed comparison reports in a very short period of time.
- A reliable basis for awarding contracts and managing them commercially throughout their duration
- A mechanism for managing changes during construction
- A method for calculating progress payments

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OGCS have an extensive in-house database of fabrication Quantities across all types of construction including Jackets, Topsides, FPSO's FPU's, Subsea and Onshore Plants which can be modelled to produce accurate bills of quantities where little or no design information is available.

History and Pedigree

The original boqsor™ system was developed during the early days of the Oil and Gas industry in the UK North Sea for the Commercial Management of large scale Offshore Fabrication Projects. This innovative concept was prompted by the demand for a structured approach to obtaining reliable fixed price bids when little design definition was available. boqsor™ was the basis for the benchmark publication "Spons – Fabrication Norms for Offshore Structures" which became the industry bible in the 1980's and 90's for estimating, tendering and commercial administration of offshore fabrication contracts. The structure and principles developed by boqsor™ now form the basis of most other software applications in use within the industry, yet it still retains its pedigree and position as a market leader.

Today, continual development, innovation and improvement mean that boqsor™ is the Unit Rate Contracting and Estimating package for the new era of Global Fabrication Projects.

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Functions and Capabilities

- **Standard and Flexible Unit Rate Library**
- **Bill of Quantity Production using historical data where limited design information is available**
- **Preparation of Feasibility and Bid Check Estimates**
- **Electronic Tendering**
- **Unit rates in both man-hours and currency values**
- **Tender Evaluation**
  Detailed Rate Analysis and Comparison
  Extensive Sensitivity Analysis
- **Post Contract Commercial Administration**
  Quantity Updates
  Evaluation of Change and Variations
  Progress Payments
  Final Account

Unit Rates - boqsor™ holds a library of discipline unit rates that over the years have become the standard commercial breakdown structure within the oil and gas industry. These rates can be modified to be project specific and to cover every possible eventuality that may be encountered within a particular project as the design develops. Each unit rate will come with its own detailed method of measurement and pricing preamble which advises bidders exactly what cost categories should be included.

Estimates – In addition to quantity data OGCS also have current unit rate norms and pricing information from all the major oil and gas fabrication locations globally including Northern and Southern Europe, Gulf of Mexico, Middle East, Asia Pacific and Korea. Once an acceptable model bill of quantities has been developed this can then be populated at the detailed level with the relevant unit rates and norms to provide reliable conceptual and bid check estimates.

Tender Evaluation - boqsor™ is an extremely powerful tender evaluation tool. Once the electronic priced schedules are received from all the bidders they are a loaded into the tender evaluation module. boqsor™ can then run detailed analysis and comparison on a rate by rate basis across all bidders highlighting where an individual rate varies significantly from the average or from the lowest rate identifying rogue rates or strategic bidding. Pre-determined growth sensitivity scenarios can also be run to identify the impact that quantity change (sp) +/- may have on individual bids

Bills of Quantities – OGCS hold extensive in-house data from previous projects providing detailed Bills of Quantities across all facilities including Jackets, Topsides, FPSO, FPU and Subsea Equipment. For new projects where little design definition is available these model bills can be manipulated to become project specific using key information such as weight reports, P&ID's, piping line lists, specifications etc

Electronic Tendering – Once the agreed project specific schedules of rates and bills of quantities have been incorporated into the tender documents they can be issued electronically to bidders either with the boqsor™ tender module or in excel format. Bidders price all items within the schedules both with manhour norms and currency values. This automatically prices the linked bills of quantities to provide the tender value.

Post Contract Administration – the approximate bills of quantities can be updated at strategic points within the design process at AFC and ultimately to reflect the as built scenario. At all times the system will automatically apply the fixed unit rates to provide an updated contract price. There are options within the system to calculate progress payments and any Variation Order can be evaluated as a "mini bill of quantities" priced at the unit rates. boqsor™ will support all commercial aspects of the project through to final account

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boqsor™ Methodology

The scope of the project is broken down, discipline by discipline, into each work unit activity. These activities are tabulated in a grid format which should cover every eventuality that maybe anticipated within the design.

The Unit Rate Schedules are priced on the basis of completion of a quantity of one by the contractor. That may be metres of pipe or cable, number of welds or terminations.

Each item in the bill of quantities has an 11 digit code which extracts the description and the rate directly from the unit rate library and automatically provides a priced bill of quantities

As well as the currency rate the contractor also provides the manhour norm for each schedule item so that the bills of quantities can also be "priced" in manhours and linked to the schedule for the project

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Specification and Technology

boqsor™ is a menu driven database application which can be run either from a stand-alone laptop or on a server. It allows full data sharing for multiple users based on individual security settings.

boqsor™ uses the .NET technology (Microsoft .net framework) and currently supports Microsoft SQL Server 2012 multiple instances/multiple database configurations. SQL Server allows data to be centrally managed, with remote copies of the application displaying and manipulating the BoQ information. With the .NET technology, boqsor is a Multiple-Document Interface (MDI) application and includes the Microsoft standard Windows menu controls.

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