

# Early Project Stage: Spares Parts Planning & Procurement for New Equipment

Challenge vendors 2 years spares recommendation and then to specify inventory parameters

16<sup>th</sup> - 17<sup>th</sup> May 2016 | Miri, Sarawak



**Media Partners:** 



# **Program Overview**

This 2 day workshop is new and focuses on the important activity of purchasing spares during the project phase. The workshop will provide the delegates with best practices and processes related to the planning and procurement of initial spares. This activity is usually done badly, resulting in duplication of stock, poor cataloguing, under or over stocking and poor ordering rationalisation.

Initial spares planning starts in the design phase with equipment specifications and the request for recommended spares parts list, until the items are handed-over to the warehouse and the items set-up in the CMMS. ISO55000 stipulates we have to demonstrate that all assets are effectively managed from cradle to grave, then initial spares planning and procurement process is an important element of asset management.

#### The course will focus on:

- The responsibilities of who does what and the timing, who buys the company or the EPC contractor and this will cover commissioning & start up spares, 2 year spares and insurance spares.
- Achieving rationalisation in the initial spares phase by creating a master recommended spares part database (RSPL) e.g. rather than purchase RSPL spares by each RSPL, we need to leverage grouping common items.
- The need to build into the design phase standardization in order to reduce the variability of item purchased.

#### **Attend this course to Master:**

- What is required under ISO55000 to manage the initial spares procurement process
- Why existing RSPL/SPIR forms are ineffective
- How to rationalize initial spares procurement using MS Access
- How to challenge vendors 2 years spares recommendation and then to specify inventory parameters
- The importance of assigning a spares criticality as this influences the selected desired service level
- How to select the right stocking strategies to minimize stock holding
- How to justify the financial case for high value spares
- Understand basic MS Access functionality that can be applied to the SPRL or SPIR master tracking & build Tool.

# **Unique features of this training:**

Having the ability to implement immediately the techniques learned once you are back at your workplace is crucial for every participant. During the 2 days training, practical involvement and exercises will be shared.

- Discuss delegate's issues with the initial spares process.
- Develop a process map (using post-lts) to cover specification, RSPLs, purchase, receiving, preservation, handover.
- Building automatically an equipment BOM.
- Converting vendors RSPL quantities into inventory control parameters.
- Reviewing RSPL procedures and formats and developing the ideal electronic RSPL.

# This program is intended

#### This training course is designed for:

- Maintenance Managers, Engineers, Planners
- CMMS super users
- Warehouse Managers & Supervisors
- Project Engineers
- Spares & Inventory Personnel
- Purchasing & Logistics

#### Early Project Stage: Spares Parts Planning & Procurement for New Equipment (2 Days)

#### **Topic 1** Common Issues with the Initial Spares

Delegates state their issues in this process

Common issues found in the process and industrial sectors, e.g. as lack of effective procedures, poor specifications, purchasing duplicates,

The above will be supported by examples/case studies collected through numerous audits and upgrade projects.

Discussion on stocking objectives

#### **Topic 2** Initial Spares Planning & Procurement Process

Review of the spares planning & procurement process categorize in 12 main phase.

Delegates should understand their company's process so that areas of opportunity can be identified

Group exercise to develop a process map (using post-lts) to cover specification, RSPLs, purchase, receiving, preservation, handover

Documents required to support the Strategic Asset Management Plan (SAMP) for initial spares. A SAMP is a key term within the new ISO55000 standard.

#### Topic 3 Effective Recommended Spare Parts List (RSPL) from Vendors

SPIRs, their purpose and why they are submitted incorrectly, principles of good spares cataloguing to ensure zero duplicates, and ease of searching

A critical review of a typical RSPL form known as a SPIR (Spare Parts Interchangeability Record and associated procedures sent to vendors. We have developed 11 review rules.

Examples of good and bad RSPL/SPIR

Proposed improved format for the electronic RSPL/SPIR that facilitates migrating to a database.

#### Topic 4 Building an effective spares catalogue

Introduction to ISO55000 and the requirements for initial spares

Key features of cataloguing including the selection vendor, i.e. OEM, original vendor or to select an alternative vendor

An introduction to our 8 step cataloguing process, and a detailed treatment of each step, including:

- Naming formats,
- Developing part type guides to ensure naming consistency
- Defining rules when vendors utilise different specification formats,
- Defining strategies for purchasing common items and to understand the scope of your maintenance strategy as this influences parts stocked,
- Documenting the cataloguing process with all the defined rules and decisions
- Building the spares catalogue and conducting quality checks
- Creating CMMS migration upload files

#### **Topic 5** Deciding Whether to Stock

The questions to be answered to decide whether to stock or not

Criticality definitions (vita, essential, desirable and non - critical)

Different approaches to aid the decisions including a simple decision diagrams for slow moving spares

Maintainability FMEA

#### **Topic 6** How to Challenge Vendors Recommended 2 Year Quantities

Introduction to reliability principles, probability distributions and the bath tub curve and its influence on spares demand

Risk and the Poisson distribution

How to estimate annual demand rates (ADR) from populations or generic data sources using a formulae requiring populations, MTBF, Utilisation Factor

**Exercise to support understanding** 

#### **Topic 7** Converting Annual Demand Rates to Inventory Control Parameters

The ROP inventory model and definitions of the metrics used

11 formulas for the key metrics including ROP, Safety Stock, Average Stock Levels and Values. EOQs, etc.

How to use the estimated ADR to establish the CMMS parameters (defined above)

Exercises using the Excel Calculation Worksheet designed to support inventory parameters using populations & MTBFs as well as Bulk items

### Topic 8 Creating Additional CMMS Spares Data

Spares class and sub class

Type codes

Spares attributes & purchase descriptions

Cost & Demand Codes including the ABC classification,

Item cost including transport costs

**UoM** 

#### **Topic 9 Building the SPIR Build & Tracking Tool**

Introduction to database solutions, what is the functionality requirements

How MS Access can provide a useful tool to support the RSPL/SPIR process

Overview of the RSPL Database tool including the structure and how data is importing

Identifying duplicates, updating installed populations for duplicated items,

Comparing calculated 2 year quantities to vendor recommended quanties, updating quantities, & the preferred vendor, printing the pro-forma PR, Exporting to the CMMS for purchasing

#### **Topic 10** Insurance Spares & Their Evaluation

Definition of an insurance spares

What is required to support the decision whether to purchase or not ( penalty costs, repair times, planned and emergency purchase lead times and costs

Overview of RAM Study Software that allows analysis whether to stock 0, 1 or 2



PETRO1 provides Oil & Gas Trainings & Consultancy services ranging from Petroleum Engineering, Exploration & Production, Subsurface and business related activities in the oil & gas industry. We had successfully made impact to petroleum professional mainly the Top 50 Oil & gas players in the Asia Pacific Region.

- Total E&P
- Petronas
- Murphy Oil
- JX Nippon
- Scomi OilHess
- Saipem
- Clough
- Mubadala Petroleum
- Bureau Veritas
- Pertamina
- Peritus international

- Petrofac
- Keppel Corporation
- Singapore refining Company
- Salamander Energy
- Binh Son Refining Vietnam
- PTT Global
- Newfield
- Atkins Australasia
- Brunei Methanol
- Curtin univeristy
- Technip
- Premier Oil

- SGS
- PTT EP
- Halliburton
- Brunei LNG Shell Chemical
- Worley Parson
- China university of petroleum Beijing
- Thaioil
- Aker Solutions
- Star Petroleum
- Jurong Shipyard

# **Principal Program Facilitator**



#### David Thompson, RAMsoft UK

David extensive experience covers all aspects in Maintenance, Reliability and Operation management. His area of strength covers specifically in maintenance management audit reports , RCA , Shutdown planning and failure code systems ,CMMS , KPIs , Spares Optimization , RCM and RAM Modelling

#### RAMsoft, UK

For the past 40 years, David had been actively involved in:

- . Conducted over 400 audits including fast track audits, in-depth audits and distance audits in maintenance management
- Developed Policy and procedures documents for a number of Oil & Gas Companies.
- Currently working for Worley Parsons in UK writing document for a number of FEED projects worldwide.
- Wrote standard and guidelines on many topics on maintainability, RCA, workpacks, Shutdown planning and failure code systems.
- Wrote over 400 audits reports covering excellence in Maintenance management and in specialist topics spares, CMMS, KPIs
  and Reliability Management system.
- Presented Papers at several Maintenance & Reliability Symposiums in Europe, Malaysia and Brazil.
- Online distant learning instructor for Robert Gordon University in Assets integrity and Reliability Management.
- Undertaking a major CMMS data Cleansing Project as part of a CMMS upgrading.

#### Symposiums

- European & world Maintenance Congress 2007
- Applied Reliability Symposiums Europe 2009, Brazil 2008, Asia 2006, 2007, 2010.
- Presented paper at the Applied Reliability Symposium Singapore 2013 (4th Year)

David has worked for many blue chip companies either directly or through a consulting role.

David,s International Clients: Nippon Oil, Talisman, Petrofac, State Oil Dubai Petroleum, Novartis, EGGBOROUGH POWER STATIONS, Chinese Oil & Gas company, worley parsons, sabic, Qatar petroleum, Scottish power, wood group, shell Nigeria, hustsman, ENI oil, Saudi Aramco and SONANDOL P&P

David has conducted many audits of maintenance practices and CMMS use spanning the last 20 years. David has a particular interest in helping companies collect better data and to try and make reliability of interest to the regular maintenance engineer by concentrating on applications rather than complex mathematical theory.

David is a certified instructor in RCA, and Reliability Methods and Techniques. David has developed and delivered training programs world-wide including both offshore and onshore facilities topics include Maximo CMMS, RCM, FMECA, Weibull Analysis, RAM Modelling, Reliability Growth, Analysis, and Fault Tree Analysis, Incident / Root Cause Analysis, work planning and control, spares optimisation. In addition David has conducted training in many other maintenance management topics.

#### Early days

David initially started in the steel making and mining sectors and for the past 15 years in the oil & gas sector. David was the UK partner for Reliasoft one of the world's leading reliability engineering companies, and is currently part of a team to implement improved Asset Reliability in the Middle East, including RAM and RCM studies.

#### REGISTRATION DEADLINE

As an internationally operating training organization, PETRO1 would appreciate receiving registrations at least one (1) month prior to course commencement. Registrations after this date will be accepted provided that places are available. We strongly recommend early enrolment to avoid disappointment!

# **Investment Packages**

Initial spares parts planning & procurement	Early Bird Full 2 Days	Standard Price Full 2 Days
Per Delegate	SGD 1998 ( )	SGD 2437 ( )

#### **REGISTER 3 AND SENT THE 4TH FREE**

- Please note that all registration must be made at the same time
- The above price are inclusive of GST 6%.

1. Name:

Early Bird Promotion Deadline - 18th April 2016

# Delegate Details

\_Mr \\_Mrs \\_Ms \\_Dr \\_

Job Title:	
Email :	
Contact No:	
Department:	
2.Name:	Mr_Mrs_Ms_Dr_
Job Title:	
Email :	
Contact No:	
Department:	
3.Name:	MrMrsMsDr
Job Title:	
Email :	
Contact No:	
Department:	
Head of Department:	
Invoice	Details
Invoice Attention to:	
Company:	
Industry:	
Address:	
Postcode:	Country:
Telephone:	Fax:
Email:	
Authorized Signature:	

# **REGISTRATION FORM**

# **PROGRAM DETAILS**

Venue: Miri, Sarawak Date: 16th - 17th May 2016

**REGISTER NOW CONTACT:** kelvin MAIN: +603 7727 3952 FAX: +603 7727 5278

Email: registration@petro1.com.my

Credit Card Payment		
Please Debit my credit card:		
☐ VISA ☐ MASTERCARD		
Card Number:		
Security Code: Expiry Date:		
Named printed on card:		
Signature:		

#### **Payment Method**

By cheque/ Bank Draft: Made Payable to PETRO1 SDN BHD By Direct Transfer: Please quote invoice numbers on remittance advice.

Organization who have register under GST is allow to claim on any GST incurred (Known as input tax) on their purchase to the business.

ACCOUNT NAME: PETRO1 SDN BHD BANK: HSBC Amanah Malaysia Berhad ACCOUNT NO: 054 - 048061 - 701 (SGD) SWIFT CODE: HMABMYKL

All bank charges to be borne by payers. Please ensure that PETRO1 SDN BHD received the full invoice amount. \* Credit card payment will include a charges 2.8%

Payment Policy: Upon receipt of a completed registration form, it confirms that the organization is registering for the seat(s) of the participant(s) to attend the conference or training workshop. Payment is required with registration and must be received prior to the event to guarantee the seat. Payment has to be received 7 working days prior to the event date to confirm registration.

Venue: All of our training courses are held in 4 – 5 star venues.

The course fee does not include accommodation or travel cost. It's recommended to book the hotel room early as there are only limited room available at the discounted

#### **DATA PROTECTION**

The information you provide will be safeguarded by Petro1 that may be used to keep you informed of relevant products and services. We take it seriously when it come s to protection of our client data.

Cancellation & Substitutions: Upon receipt of a completed registration form, it confirms that the organization is registering for the seat(s) of the participant(s) to attend the conference or training workshop. Should you be unable to attend, substitutes are always welcome at no additional cost. Please inform us as early as possible. Payment is non-refundable if cancellation occurs 7 working days prior to event commencement. However a substitute is welcome at no additional charges. If cancellation occurs 5 working days prior to the registration date and there is no substitute, the organizer reserves the right to charge 50% of the total investment from

PETRO1 SDN BHD is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. PETRO1 SDN BHD shall assume no liability whatsoever in the event this training course is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, war, fire, labor strike, extreme weather or other emergency.

Walk in Registration: Walk-in participants with payment will only be admitted on the basis of seat availability at the event and with immediate full payment

**Program Change policy**: The organizer reserves the right to make any amendments and/or changes to the workshop, venue, facilitator replacements and/or modules if warranted by circumstances beyond its control.