



Asset verification &
valuation : Reference
project



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Introduction

SPIE Controlec Engineering B.V and
Cost Engineering Consultancy B.V. cooperate
under the name SCE

SCE offers services to determine and verify the
value of industrial Assets

Financial Background

- + Financial guidelines and policies such as IFRS, US GAAP, SOx require transparency and verified value of industrial assets
- + Asset databases and as built documents are not always kept up to date
- + Up to date asset database allows for correct computation of depreciation and for tax and insurance purposes

Reference project specifics

- + Owner : International Oil Company
- + Asset database : 100.000 records
- + No. Of production units : 80
- + Visual inspection teams : 2
- + Scope : Update asset database, verify assets on site, determine value per asset class and check depreciation methods
- + Organisation : Combined task force technical and financial specialists

Project Approach

Step 1 : Determine boundaries of installations (plants, units) and identify match with financial databases

Step 2 : Collect information / documentation

Step 3 : On site inspection

Step 4 : Equipmentlist verification

Step 5 : Cost verification

Step 6 : Reporting

Boundaries of installations

Identification of plants and units

- Indicate battery limits on plotplans
- Inside Plot : Production units / utilities
- Outside battery limits : Tankage, piperacks, roads, firewaterlines, sewersystems, cables



Documentation

- Retrieve relevant information from archives
 - Plotplans
 - P&ID's
 - Equipmentlists
 - Inspection reports
- Prepare field inspection checklists
 - Based on asset database and archive
 - Removal of irrelevant items

On site inspection

- + Visual inspection
- + Identify additions / deletions
- + Verify if all parts of the plant are in operation
- + Keep records and make photographs

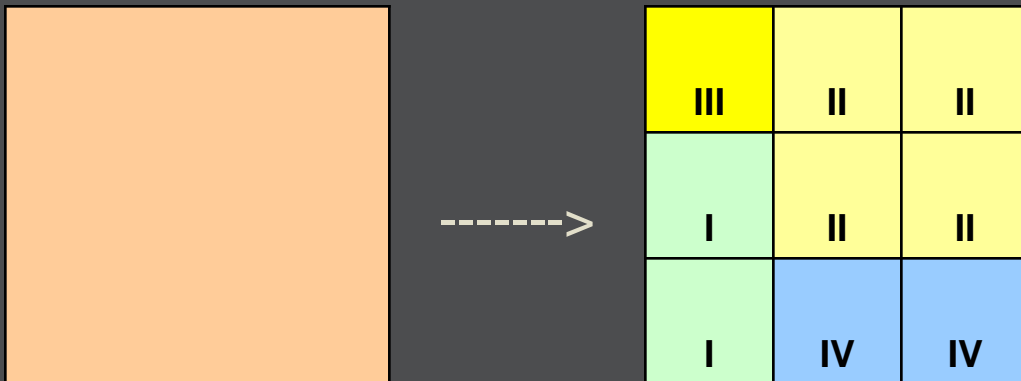


Equipment list verification

- + Compare the field verified equipment list and the list from the financial asset database and clarify differences with owner

Cost verification

- + Mix of several factor estimating methods
- + Using calculation models
- + Input : Equipment prices
- + Split up installations in parts with similar complexity



Cost verification ⁽²⁾

- + After calculation : combining various models within one plant
- + Re-organizing results to various disciplines as used by the customer
- + Re-organized results are incorporated in the asset list

Reporting

+ Conclusions of field verification

- Deletions, idle equipment / installations, new assets
- Regrouping of assets

+ Revised verified asset database

- Including verified equipment costs
- Including total overview of all plants
- Including total overview of all outside battery limits assets
- Per location
- Per asset class

Conclusions

- + Accuracy asset databases deteriorates during the years due to frequent modifications of the industrial assets:
 - Difference of average 5% of equipment present on site versus registered in asset database
 - Much of registered under ground piping work and sewer systems are not in operation but are still registered in asset database
 - Additions and deletions on site that do not belong to production unit, storage or utility area are not consequently registered in asset database (Pipe racks, general buildings, roads)

Conclusions ⁽²⁾

- + Capitalization of assets take place in case of in kind replacement or deletions are not registered in the asset database
- + Indexing to calculate depreciation often needs careful evaluation
- + External consultant helps owners to point out inconsistencies in asset management and financial asset management

Conclusions ⁽³⁾

- + Dedicated integrated task force for inspection and cost engineering guarantees high quality and efficient approach for asset verification
- + Determine correct buying and selling price of industrial assets during due diligence processes

Questions ?

