

# Integrated Asset Management – Contracting

Generating more value from the Physical Assets of our customers



thyssenkrupp

thyssenkrupp Industrial Solutions' Integrated Asset Management (IAM) portfolio is designed to generate more value from the physical assets of its customers in industry, infrastructure & energy sectors. This involves unlocking the untapped value and implementing new value enhancing solutions. This is achieved through better performance, for longer life and at an optimum cost.

IAM contracts are offered to customers looking to outsource various functions related to asset management (operation & maintenance/ maintenance) to a capable and value creating partner.

Typically IAM contracts are based on a 3 to 5 years' agreement that can be further extended on mutual agreement. During these contracts, thyssenkrupp takes over the full line-responsibility for the plant by implementing an IAM system covering 7 dimensions:

- Health, safety, environment and statutory management
- Operations management (for O&M contracts)
- Maintenance management
- Materials and services management
- Performance improvement
- Management information system (MIS) and visibility
- People management

For brown field plants, the first step is a plant assessment in form of 2 to 3 days of plant visit, data review and interviews with key plant personnel. For green field projects, this process is less exhaustive.

The next step is to submit a technical offer comprising of battery limits, list of equipment & systems, scope of work, division of responsibilities, exclusions, HR plan covering an organogram, recruitment & development plan etc. Once the above is agreed with the customer, a proper priced techno commercial offer is submitted.

A mobilization period proportional to the resources required and their availability is the key to a proper execution of such contracts. Generally it may take anywhere between 3 to 6 months.

These contracts have a provision for performance linked bonus and liquidated damages. The performance is measured against a pre-defined set of weighted key performance Indicators.

This service can be offered to new or existing plants and plants with thyssenkrupp proprietary equipment or third party plants.

The services can also be offered along with operating & maintenance consumables and third part services. The supply of main production consumables such as raw materials, additives, electricity and fuel are the responsibility of the customer.

## Service advantages

- Better performance and longer life at optimum costs
- Improved safety, reliability, availability, productivity, life and efficiency of physical assets
- Higher returns on capital employed



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Asset management

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# 360° Service

Service solutions throughout the entire life cycle of your plant



thyssenkrupp



## Parts & supply management

We are the experts when it comes to the supply with spare and wear parts for your plant – over the entire lifetime, at the right time and with the right quality.

### Spare parts supply

- All spare parts and components for your asset in OEM quality
- Always state of the art technology with guaranteed functionality
- Attractive frame contracts and supply agreements

### Wear parts solutions

- Development of wear parts according to your requirements
- Individual solutions in regards of quality and performance
- Innovative wear parts concepts

### Advanced parts solutions

- Engineering and manufacturing of individual spare parts
- Continuous further development of spare parts and components in order to increase the performance of your plant
- Spare and wear parts for plants genuinely not developed by thyssenkrupp



## Field & workshop services

We offer you local assistance when it comes to overhauling spare and wear parts, or when maintenance and servicing is needed.

### Technical inspections

- Forward-looking inspections of machines and components

### Repairs and field support

- Fulltime site support and advice after handover of equipment
- Fault identification and emergency repair of components
- Installation and dismantling
- Equipment adjustments and alignments

### Workshop services

- Local fabrication of spare parts
- Refurbishment and supply of thyssenkrupp and third party components

### Operator & maintenance training courses

- Customer training for all areas of thyssenkrupp portfolio
- Utilization of product experts within thyssenkrupp's global network



## Revamps & outages

Over the course of time, demands change. In order to meet these changed demands, we offer you custom-tailored revamp solutions.

### Analysis, engineering and manufacturing

- Plant status and environmental analysis and assessment
- Feasibility studies
- Basic, front-end and detail engineering
- Manufacturing of individual equipment

### Plant improvements

- Custom-tailored revamps and retrofitting solutions
- Debottlenecking through capacity extensions
- Efficiency enhancement through modernization and upgrades
- Emission reduction
- Safety and integrity upgrades
- Reliability improvement

### Revamps execution up to EPC

- Execution of complex revamp and outage projects
- Execution of EPC revamps projects
- Custom-tailored risk and profit sharing models

### Turnaround management

- Management of plant turnarounds



## Asset management

We offer you a holistic asset management approach in order to reduce the overall operating expenses of your plant.

### Consulting

- Evaluation and assessment of effectiveness and efficiency
- Process mapping and gap analysis
- Derivation and supervision of improvement measures

### Technical guidance

- Implementation of improvement measures
- Technical improvement of existing machines and components
- Strategic analysis and future planning
- Improvement of processes and procedures

### Operation & maintenance contracts

- Complete or partial take-over of maintenance and/or operations activities
- One-stop operation and maintenance solutions including (optional) parts and consumables
- Custom-tailored business models focusing on a win-win situation

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