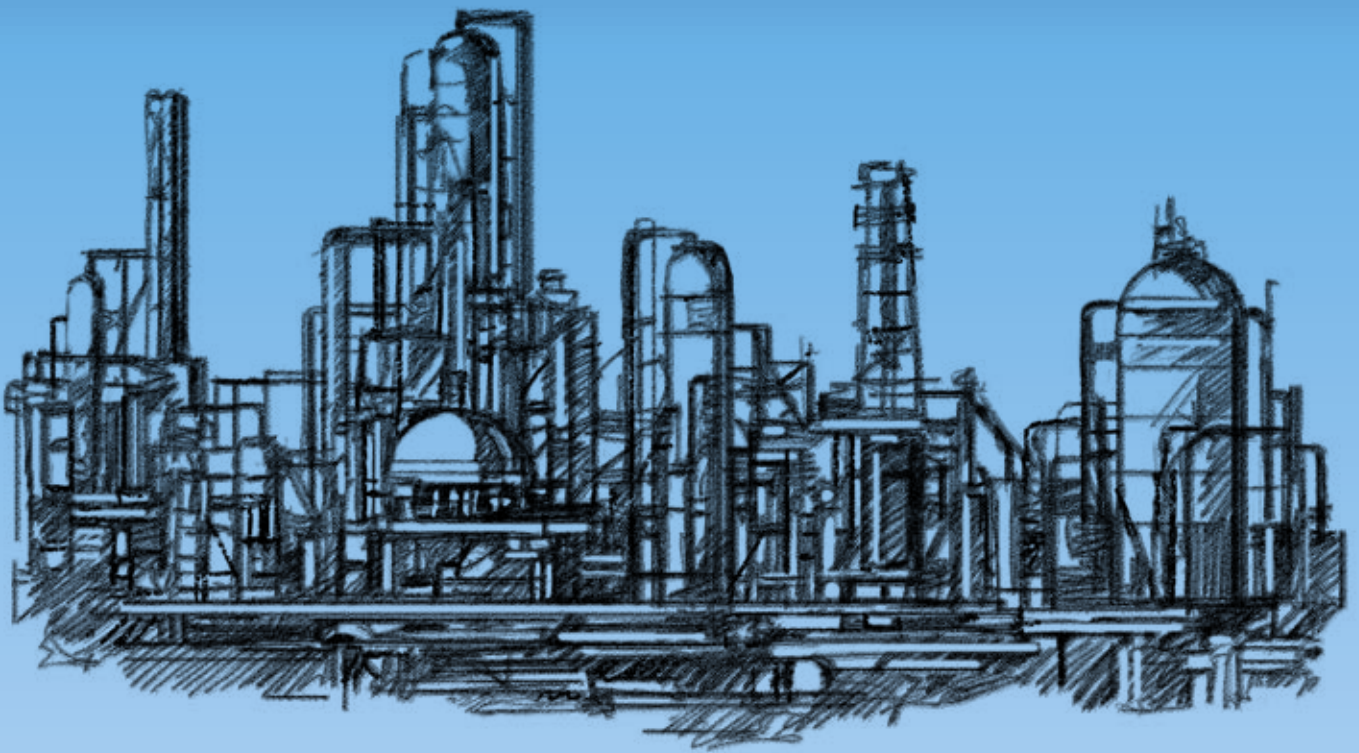




**JOTUN**

***Jotachar***

1709  
*mesh free*



*Mesh free epoxy passive fire protection  
for the hydrocarbon processing industry*

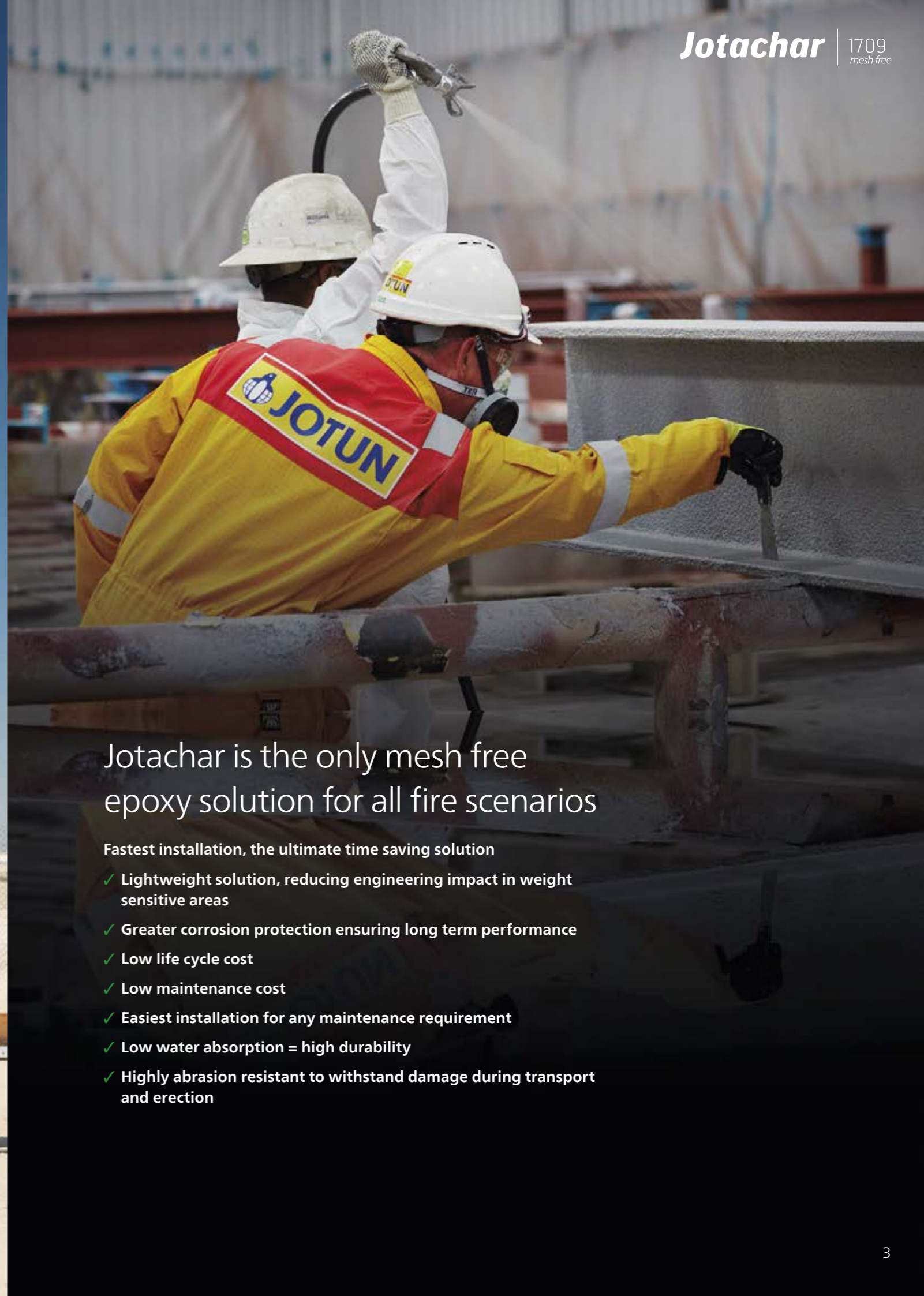




**Assets and personnel in the hydrocarbon processing industry are at significant risk from explosion and hydrocarbon fires.**

Without passive fire protection (PFP) measures, these incidents can escalate rapidly, leading to:

- ✗ Loss of life or serious injury
- ✗ Catastrophic damage to assets
- ✗ Plant shutdown
- ✗ Interruption to production

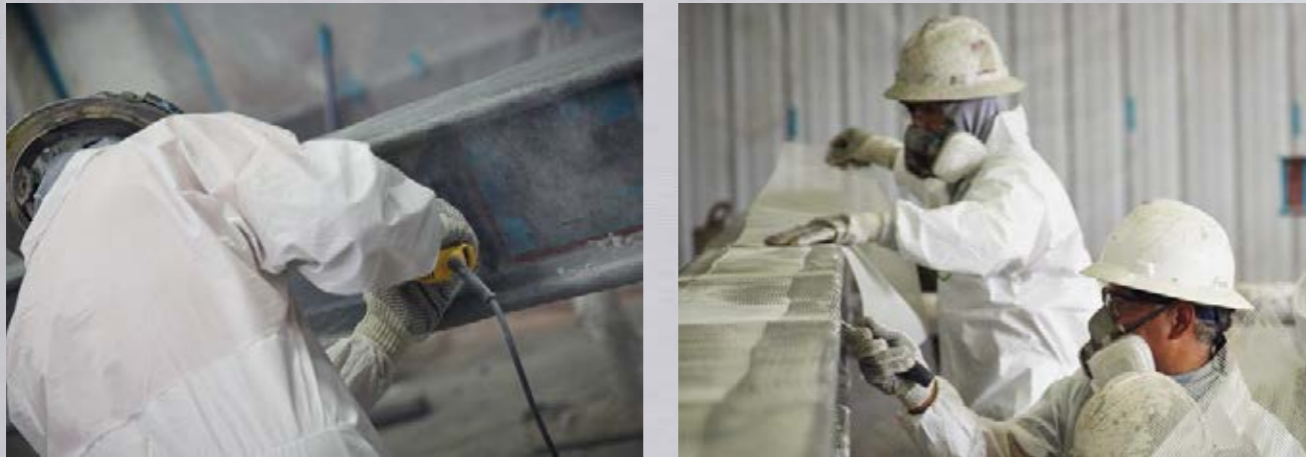


Jotachar is the only mesh free epoxy solution for all fire scenarios

Fastest installation, the ultimate time saving solution

- ✓ Lightweight solution, reducing engineering impact in weight sensitive areas
- ✓ Greater corrosion protection ensuring long term performance
- ✓ Low life cycle cost
- ✓ Low maintenance cost
- ✓ Easiest installation for any maintenance requirement
- ✓ Low water absorption = high durability
- ✓ Highly abrasion resistant to withstand damage during transport and erection





**The industry's challenge has been to design an epoxy PFP with low installed weight whilst removing the requirement for additional mesh reinforcement combined with the fastest possible installation.**

Low-cost solutions such as concrete and lightweight cementitious materials are often unable to meet client requirements for long term corrosion protection, durability and low life cycle cost.

Early deterioration of low cost systems can lead to reduced fire protection, compromising the safety of personnel and the protection of assets and inventory.

Traditional epoxy PFP materials often need additional mesh reinforcement to guarantee certified performance. Any requirement to install mesh introduces risks associated with omission or incorrect installation.



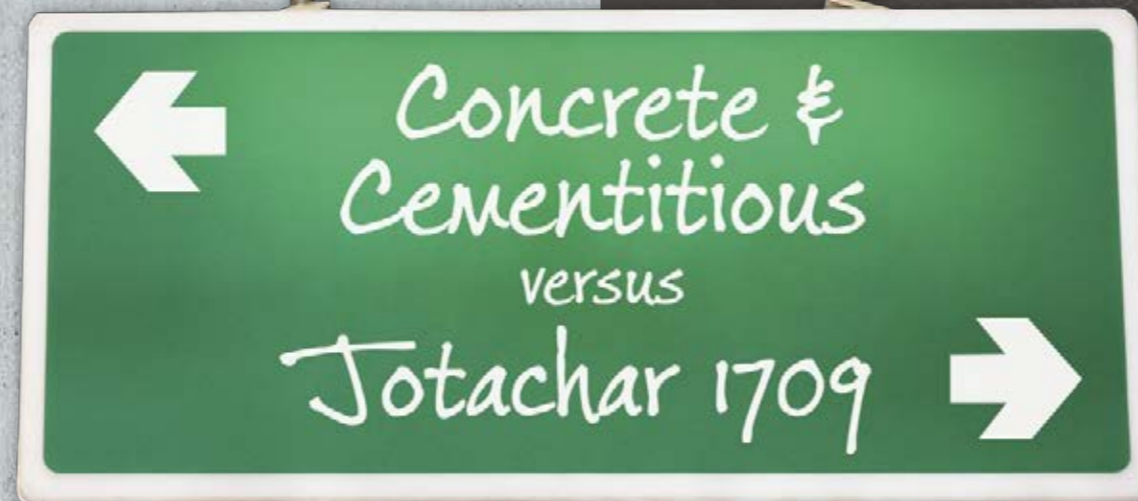
**Jotun has introduced Jotachar 1709 mesh free, a next generation epoxy passive fire protection material, designed to protect against hydrocarbon fire scenarios for up to 4 hours as defined in the ANSI/UL1709 Standard.**

- ✓ Time saving solution
- ✓ Enhancing constructability
- ✓ Low installed weight
- ✓ Fast return to service for maintenance projects
- ✓ Reduced project completion time
- ✓ Reduced occupational risk
- ✓ Flexible solution
- ✓ Reduced risk
- ✓ Low life cycle cost



The  
Solution





## Concrete and lightweight cementitious disadvantages

**Concrete & cementitious-based PFP materials have been widely used in the hydrocarbon process and related industries.**

Whilst they are considered low cost options, deterioration due to weathering, industrial environments and lack of maintenance can lead to extensive substrate corrosion and compromised safety.

Dense concrete has a high installed weight, requiring additional engineering considerations when specifying.

- ✗ Requires steel reinforcement such as welded mesh or galvanised steel wire
- ✗ High thermal conductivity
- ✗ Time consuming installation where forming must be prepared
- ✗ Requires waterproof topcoats to protect against corrosion, moisture and liquid hydrocarbon penetration
- ✗ Potential falling hazard should corrosion occur beneath the PFP
- ✗ Frequent and detailed inspection and maintenance required to prevent deterioration
- ✗ Sealants and weather caps may be required at terminations
- ✗ Extensive 'blockouts' required where application takes place in fabrication yard
- ✗ Labour intensive to install
- ✗ Heavy and expensive to transport pre-coated sections

## Jotachar 1709 advantages

- ✓ Easier to install, no pins, no metal or fabric mesh
- ✓ Continuous application process
- ✓ Reduces project completion time
- ✓ Apply at site or off-site with lower transport costs
- ✓ Significantly reduces asset down time when used for on-site repair or maintenance
- ✓ Low moisture absorbency
- ✓ High resistance to freeze-thaw cycles in challenging environments
- ✓ With an aesthetic finish
- ✓ No topcoat required





## Life cycle costs

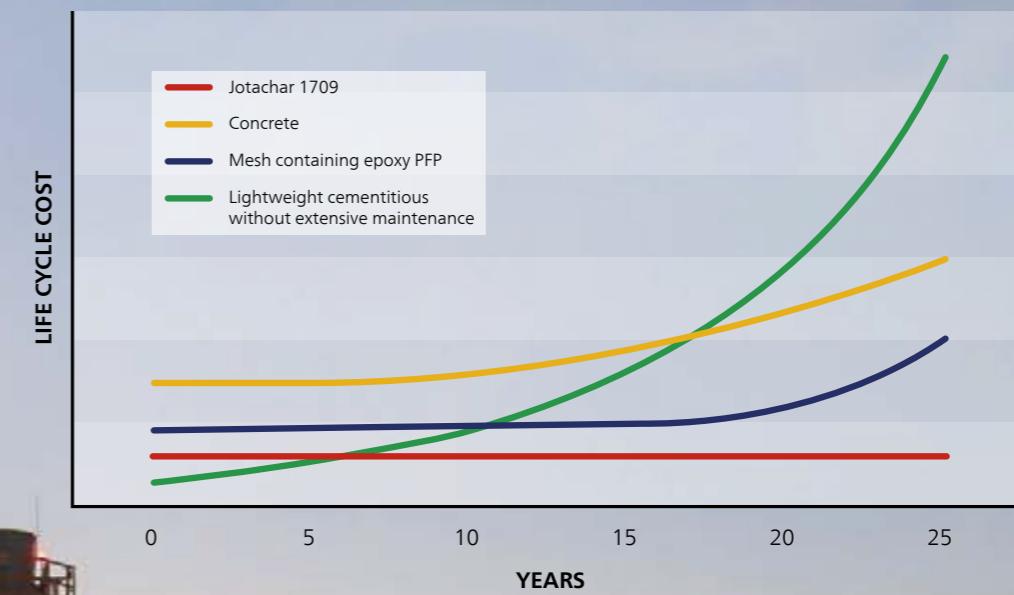
**Jotachar 1709 provides combined passive fire protection and corrosion protection with a low life cycle cost to the asset owner.**

- ✓ Highly durable with long life to first maintenance, tested to rigorous industry durability standards
- ✓ Mesh free time saving solution
- ✓ Up to 50% increase in installation efficiency
- ✓ No compromise in fire and corrosion protection
- ✓ Zero cost for mesh reinforcement materials e.g. pins, metal or fabric mesh
- ✓ Substantial installation time saving
- ✓ Lower maintenance costs compared with all other systems



## Jotachar 1709 life cycle cost benefits

- ✓ Initial cost of material:
  - higher for traditional mesh containing epoxy PFP and concrete
- ✓ Initial cost of application is higher for concrete
- ✓ Ongoing maintenance cost is lower for Jotachar 1709
- ✓ Operational benefits/performance for Jotachar 1709:
  - faster return to service
  - 25 year corrosion protection
- ✓ Value vs risk – low risk of failure with Jotachar 1709, higher for others





No. \_\_\_\_\_

NAME \_\_\_\_\_

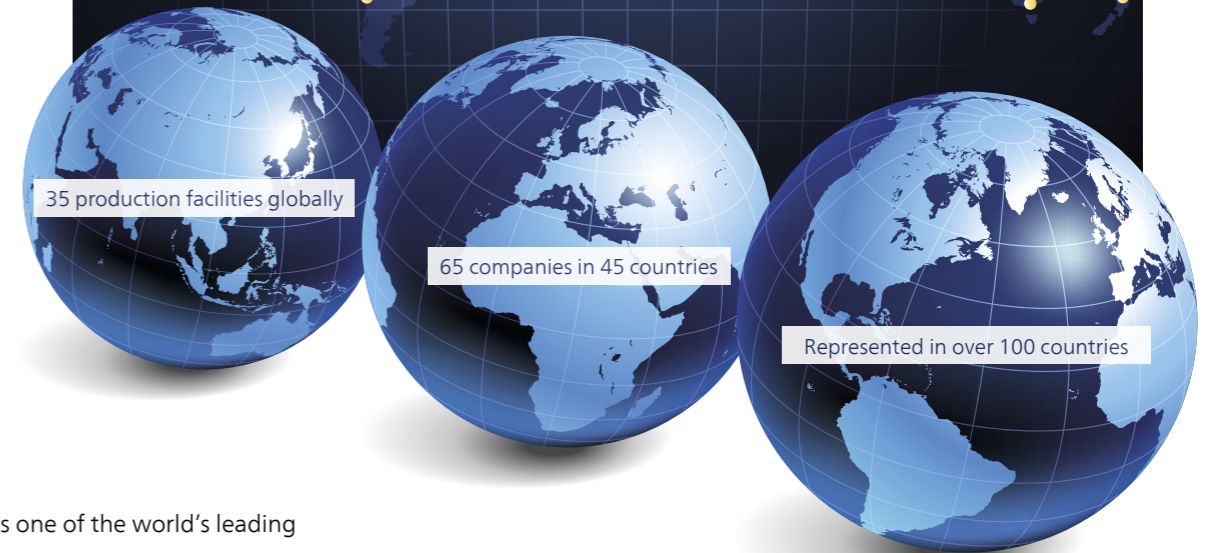
PAY PERIOD ENDING \_\_\_\_\_

*The time-saving solution*

DATE	BY	AMOUNT	REMARKS
1st DAY	IN		
2nd DAY	IN		
TOTAL			
AMOUNT			
TOTAL			
TOTAL DEBIT			
BALANCE			
NO. OF EXEMPTIONS			

- ✓ Increased productivity, no mesh installation
- ✓ Faster project completion
- ✓ Less downtime, no mesh inspection points
- ✓ Continuous application
- ✓ Up to 50% reduction in time and costs
- ✓ Lower life cycle cost

## A global provider of coatings



Jotun is one of the world's leading manufacturers of paints, coatings and powder coatings.

We have 65 companies in 45 countries and 35 production facilities in 21 countries on all continents, and are represented in over 100 countries with our network of agents, branch offices, distributors and sales offices around the world.

Our operations cover development, production, marketing, R&D and sales of paints and coatings to protect and decorate surfaces in residential, shipping and industrial markets.

### UNIFORM STANDARD ACROSS THE GLOBE

- Easy to exchange trained technical personnel across national borders and multi-national projects.
- Compulsory training for all technical and sales personnel in marine and protective segments. Most of our coating advisors and technical personnel have FROSIO and/or NACE certification.
- Same competence in maintaining company standard procedures globally.

### Jotun GreenSteps

#### FOR A MORE COLOURFUL WORLD, WE ALL NEED TO BE A LITTLE GREENER

Jotun recognises the responsibility it has to the environment and has established its own GreenSteps programme.

Through the GreenSteps programme we address market demand for more sustainable coatings solutions.



# Jotun Marine Coatings and Jotun Protective Coatings offices worldwide

Legal Jotun entities worldwide are listed. For details of Branch offices and Jotun representation in countries not listed, please visit [jotun.com](http://jotun.com)

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