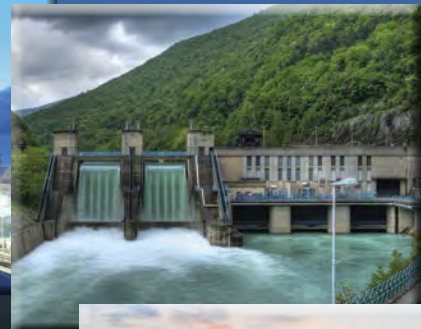




JOTUN

Coatings for Energy Installations



Coatings for Energy Installations –



GLOBAL EXPERIENCE – LOCAL PRESENCE

- More than 40 years' experience in the energy industry.
- Millions of square metres protected and hundreds of projects completed on every continent.
- A comprehensive database of proven solutions using products of the highest environmental standard.
- Experienced in providing tailor-made processes for new constructions and maintenance programmes to reduce downtime and protect assets.

EDUCATION AND TRAINING

- The TSS Academy is an established system for education and training for management, technical support staff and corrosion engineers.
- Jotun Paint School provides both practical and theoretical training for customers.

In addition to standard courses, customised training programmes are offered to meet the demands of different groups.

products and people – the total solution



JAMP (Jotun Asset Management Programme)

- Avoids unplanned shutdowns due to coating problems.
- Helps maximise the lifecycle of coated or pre-coated assets, thus extending maintenance cycles.
- Supports preparation of maintenance programmes, providing long-term corrosion protection coating systems.
- Addresses issues related to planned maintenance of a plant in operation or at shutdown.
- Recommends coating systems.

TEAM NO.1

- An unrivalled comprehensive support function at every Jotun location worldwide.
- A team of highly trained, experienced coating specialists, certified to FROSIO or NACE certification standards working as a team both together and with their customers.





Hydro power – an 80 year

In Norway 95% of all power is hydro. There in its home market, Jotun's products have been protecting hydro energy installations for more than 80 years.



PROTECTING HYDRO POWER PLANTS

- Jotun has served the hydro energy industry for over 80 years, providing coating solutions for steel and concrete.
- In Norway, 95 % of all power generation is hydro energy. Jotun's extensive experience allows us to offer customers effective solutions to challenges related to newbuilding and maintenance.



track record of protection

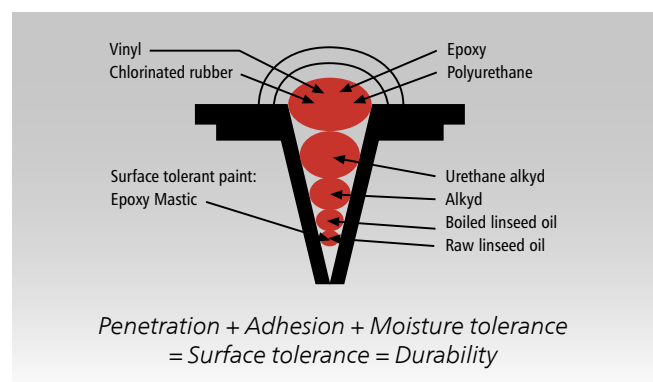


WE UNDERSTAND OSMOSIS

- When choosing a coating system for a hydro power station, it is especially important to be aware of the challenges with osmotic blistering.
- Osmotic blistering occurs if salts or other contaminants are present on the surface before coating.
- A hydro power plant will be frequently exposed to fresh water, and the risk of osmotic blistering will increase due to little or no salt in the water and with the cleanliness of the water.

THE JOTAMASTIC RANGE – AN OUTSTANDING TRACK RECORD FOR PROTECTION OF POWER PLANTS

- The Jotamastic range has more than 25 years' proven track record for newbuilding and maintenance.
- With more than 1.2 billion square metres protected, the products are used extensively in the hydro energy sector.
- Jotamastic coatings provide a variety of solutions for repair and maintenance. A Jotamastic anticorrosive system can be tailor-made to meet specific requirements for exposure and durability.
- Jotamastic requires no blast cleaning – reducing time and cost with no compromise in protection.
- Jotamastic can be applied on most clean and sound surfaces – reducing downtime.
- Jotamastic is the optimal solution for difficult to reach areas, where good surface preparation is not possible.



PENSTOCK INTERNAL SYSTEM

PRODUCT	NO.OF COATS
Jotamastic	1
Jotamastic	1



Thermal power – proven

PROTECTING THERMAL POWER PLANTS

- Thermal power provides 60% of the world's electricity. Jotun is dedicated to the protection of the various components of these plants.
- The focus is the protection of a plant against corrosion due to industrial dust, rain, weathering, salt, humidity and chemicals.
- Jotun solutions are designed to protect the assets, reduce maintenance costs, avoid unnecessary shutdowns and extend the lifetime of the plant.

JOTUN WILL COVER YOUR NEED FOR CORROSION PROTECTION OF:

- *Boiler steel structure*
- *Turbine house structure*
- *Cooling tower*
- *Water pipes*
- *FGD system*
- *Chimney*
- *Storage tank*
- *Coal conveyer system*
- *Stock yard*
- *Jetty*



success in high performance protection



CHEMFLAKE – THE SOLUTION TO WITHSTANDING SULPHURIC ACID

Jotun’s Chemflake products are advanced glass flake reinforced vinyl ester coatings that outperform traditional systems.

CHIMNEY INTERNAL SYSTEM

PRODUCT	NO.OF COATS
Chemflake	1
Chemflake	1



Jotun’s Tankguard product range provides a wide range of systems for water storage.

TANKGUARD – OUTSTANDING CHEMICAL RESISTANCE AT HIGH TEMPERATURES

Jotun’s Tankguard product range is specially designed for tank linings solutions.

INTERNAL WATER TANK SYSTEM

PRODUCT	NO.OF COATS
Tankguard	1
Tankguard	1



Wind power – 50 years



PROTECTING WIND POWER PLANTS

- Jotun has experience in providing corrosion protection for wind towers, blades and nacelles. As a result, Jotun can offer you a complete range of coatings for onshore and offshore installations.
- Jotun's tailor-made coating solutions are designed to meet the most challenging offshore environments.
- With decades of experience in the North Sea, Jotun is recognised for long-term corrosion protection without maintenance. Today many systems are pre-qualified to NORSOK standards.
- Jotun's high quality coatings help protect your assets and reduce maintenance to a minimum.

unrivalled corrosion protection experience



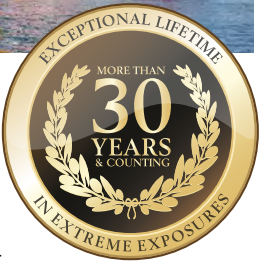
JOTATOP BC – IDEAL BLADE COATING WITH EXCELLENT ABRASION RESISTANCE

BLADE COATING SYSTEM

PRODUCT	NO.OF COATS
Jotatop BC	1
Jotatop BC	1



BALTOFLAKE – PROVEN MAINTENANCE FREE FOR 30 YEARS



Baltoflake has a lifetime expectancy of more than 30 years – the longer the lifetime of a coating, the greater the potential for savings.

There are examples of structures protected with Baltoflake over three decades ago which have not required any maintenance since the date of application.

Baltoflake’s unrivalled track record of extended maintenance-free protection provides security and economy – truly a ‘paint it/forget it’ cost-effective solution over the design life of the project.

Baltoflake combines the strength of specially formulated polyesters with a unique glass flake reinforcement.

PREMIUM SYSTEM FOR OFFSHORE TOWERS

PRODUCT	NO.OF COATS
Baltoflake	1
Baltoflake	1



Nuclear power – the well-

PROTECTING NUCLEAR POWER PLANTS

- Jotun's range of innovative products is the result of advanced technology and extensive experience of providing long lasting, low maintenance solutions for corrosion protection in harsh environments where safety is a priority.
- For nuclear power plants, Jotun provides tailor-made protection through a wide range of anticorrosive, antifouling and intumescent coatings – pairing considerable economic benefits with a proven track record.
- The Jotun product range provides economic, durable solutions to the protection of steel and concrete, passive fire protection and protection against fouling of cooling water pipes. We provide coating systems especially suited for protection of nuclear islands, conventional islands and balance of plant (BOP).

PRODUCTS FOR NUCLEAR POWER PLANTS

BARRIER

Long lasting coating system with high quality zinc

PENGUARD

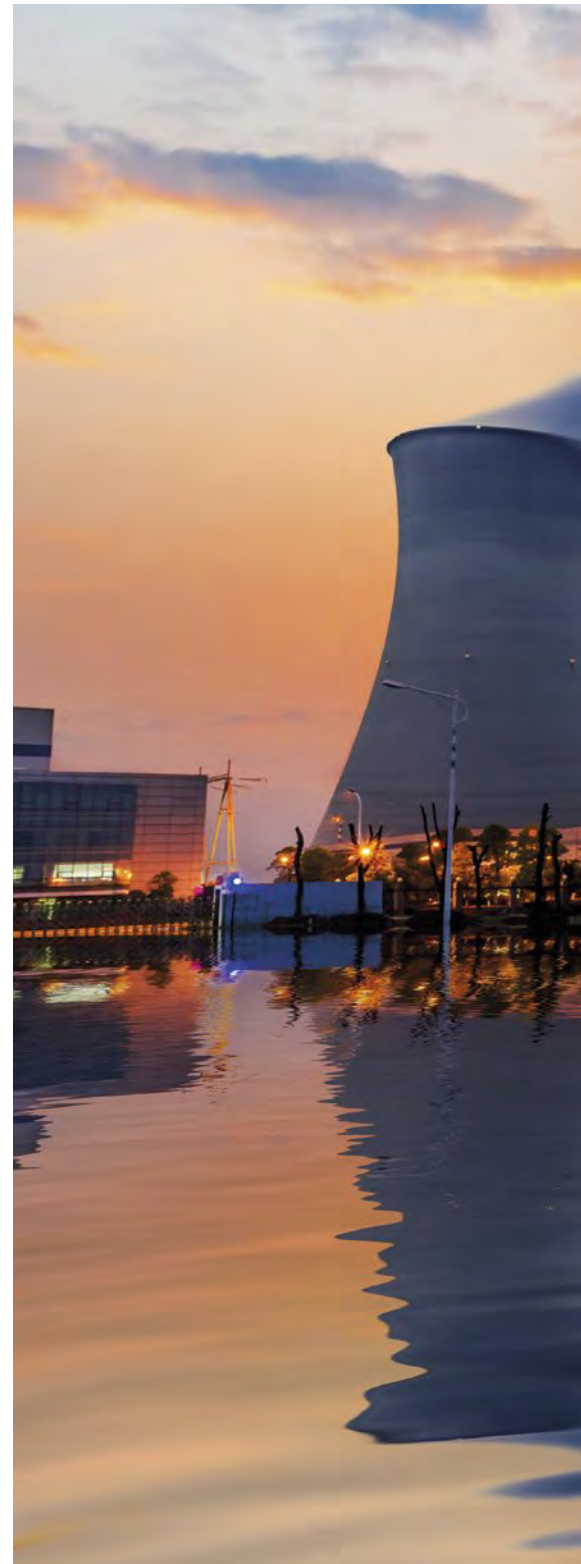
A solution using various epoxy technologies to meet an increasingly demanding market

HARDTOP

Premium topcoats satisfying all your demands

TYPICAL SYSTEM FOR CONVENTIONAL ISLAND STEEL STRUCTURES

PRODUCT	NO.OF COATS
Barrier	1
Penguard	1
Hardtop	1



proven, ultimate solution



Coatings for Energy Installations

Our key brands

Baltoflake

Baltoflake is Jotun's range of glassflake reinforced polyester coatings – outperforming traditional protection. The Baltoflake brand represents extremely abrasion resistant and fast curing anticorrosive coatings, ideal for splash zones and immersed areas. More than 30 years' proven track record on offshore installations in the North Sea

Barrier

Barrier is Jotun's range of two-pack zinc rich epoxy primers with a high zinc content. Recommended for use as a zinc rich primer on blast cleaned steel. Barrier is used in combination with advanced coating systems to further improve protection against corrosion.

Chemflake

Chemflake is Jotun's range of easy to apply, fast curing and long lasting barrier coatings for storage tank internals. These products are designed to deliver major reductions in application time with faster curing, as well as being long lasting and versatile.

Jotun Protects Property

Illustrated here is a selection of energy projects around the world protected by Jotun.

1. Guangdong Yangxi Thermal Power Plant, China.
2. Zafarana Wind Farm, Egypt
3. Xinjiang Hami Wind Farm, China
4. BorWin Beta Offshore Converter Platform, North Sea, Germany.
5. Afsin Elbistan 'B' Power Plant, Turkey.
6. Ras Al Khair Power & Desalination Plant, Saudi Arabia.
7. Taizhou II Power Plant Cooling Towers, China.
8. Hunderfossen Hydro Power Plant, Norway.



Hardtop

Hardtop is a range of two component topcoats to be used as the final coat in an anticorrosive system – delivering properties like gloss retention, colour flexibility and chemical resistance. Whatever demand you have for a topcoat you will find it in the Hardtop range.

Jotamastic

Jotamastic is the market's first choice for long lasting protection on aged steel and surfaces without optimal preparation, thus saving time and money during the maintenance process. The Jotamastic brand has more than 25 years' proven track record in the harshest environments.

Penguard

Penguard is a fast drying, high solids two-pack epoxy coating which may be applied in high film thickness and at lower temperatures.

Can be used alone or in various systems of primers and topcoats.

Tankguard

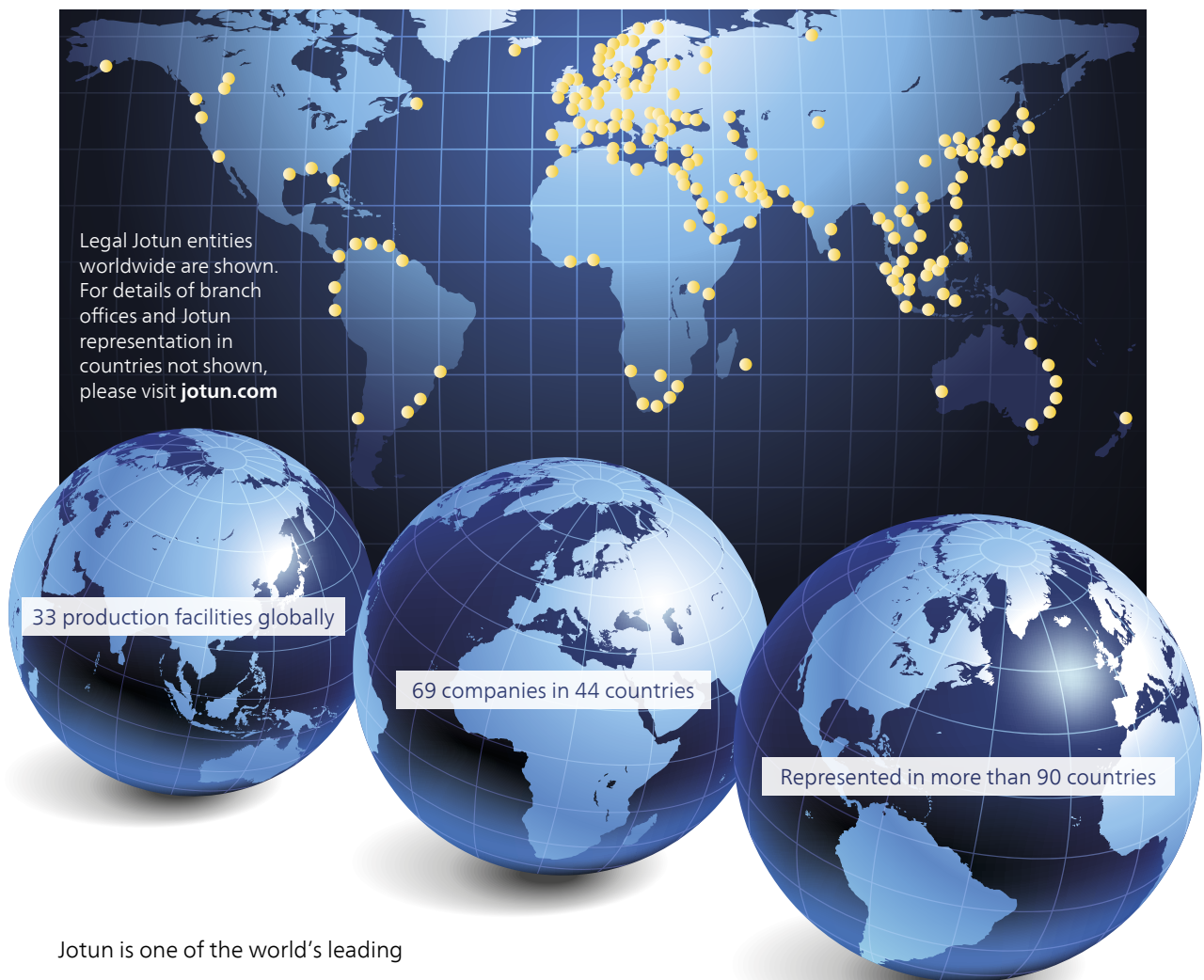
Jotun's Tankguard products have been specifically developed to protect chemicals inside tanks from contamination in addition to preventing corrosion of the tank itself. The range covers products that are resistant to a wide range of chemicals and products.





Jotun Protects Property

A global provider



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

We have 69 companies in 44 countries and 33 production facilities in 22 countries on all continents, and are represented in more than 90 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.

of coatings

Jotun is organised in four segments and seven geographical regions with its head office located in Sandefjord, Norway.

PROTECTIVE COATINGS

Our protective coatings are protecting assets in industries such as offshore, energy, infrastructure and hydrocarbon processing.

MARINE COATINGS

As the world's leading provider of marine coatings we supply to ship owners, management companies and others for newbuilding, seastock and dry-dock.

POWDER COATINGS

Our powder coatings are supplied to manufacturers of appliances, furniture, building components, pipelines and general industries.

DECORATIVE PAINTS

Our interior and exterior paints are being used by consumers and professionals worldwide, for protection and decoration.

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.



Reducing
VOC
emissions



Reducing
hazardous
materials



Reducing
energy
consumption



Reducing
carbon
footprint



Reducing
waste

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

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Jotun Protects Property