

Seawater-Piping

Sprayable elastomeric coatings to reline used piping systems or for the initial treatment of new tubing. Particularly suitable for installations suffering from severe impact and abrasion

Fields of application:

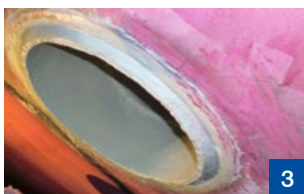
- pipes (starting at 50 mm diameter)
- curved or straight tubes
- flange coatings
- ballast water treatment systems
- ballast water piping
- seawater inlets



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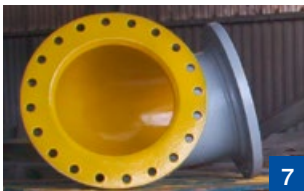
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- 1 Proven rubberlike spray solutions for curved / contorted pipes
- 2 Seawater pipes during the spray coating at the drydock Lisnave, Portugal
- 3 Seawater inlet elastomerified with 2 mm MetaLine 785
- 4 MetaLine offers smooth surfaces – even on corroded parts
- 5 Internal elastic pipe coating including all flange areas
- 6 Seamless protection concept from the flange via the tube
- 7 Superior to rubber and less cost intensive as epoxy-ceramic compounds

Filter / Strainers Water Treatment

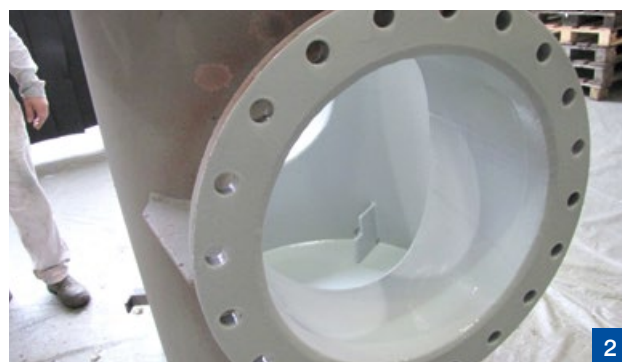
Sprayable elastomeric coatings for the repair or complete re-lining of maritime filter equipment. Seamless homogenous rubberlike character. Fully closed coating concept starting from the complete interior up to the outer flanges

Fields of application:

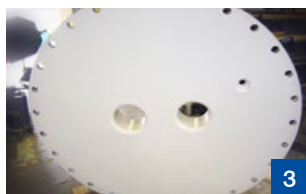
- strainer bodies
- strainer covers
- wastewater purification systems
- desalination equipment



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- 1 MetaLine 785 coated strainers prior to installation
- 2 Seamless elastomeric spray lining of a used strainer
- 3 More resistant than rubber – the MetaLine elastomeric coatings
- 4 Resistant due to an integrated borderline anti-corrosion primer
- 5 Seawater filters with a 2-3 mm MetaLine liquid rubber lining
- 6 Coated ballast water treatment part waiting for the final assembly
- 7 MetaLine 785 resists sandblasting and will survive the load in your strainer ...

BWT Reactors

The treatment of ballast water due to IMO standards – no matter if using active substances, cavitation, UV-light or whatsoever neutralization process – is a stressful demand for the reactor equipment.

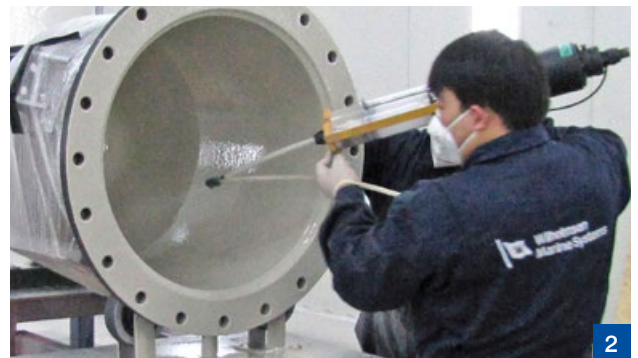
MetaLine 785 is an approved coating solution to protect the reactor or its piping equipment. Furthermore the use of expensive saltwater-resistant stainless steel equipment can be minimized

Fields of application:

- Ballast water reactors
- Ballast water pipes
- Ballast water pipe bends



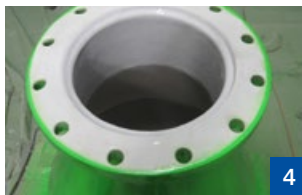
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- 1 Elastomeric characteristics help to meet the new IMO Standards
- 2 Whenever it comes to success, the MetaLine APPLICATOR S-700 is involved
- 3 Details of the nests where the cavitation cathodes are implemented
- 4 Showing the full lining concept – via the interior up to the flanges
- 5 MetaLine 785 coated pipes waiting for the final quality inspection
- 6 Ready to go and ready for the installation on board

Pumps / Rotary Valves

Sprayable elastomeric coatings to refurbish worn parts or for the preventive maintenance of new equipment. Extremely resistant to erosion, cavitation and corrosion

Fields of application:

- open impellers
- closed impellers
- spiral pump casings
- split case pumps
- submersible pumps
- vacuum pumps
- rotary valves
- cooling water pumps
- wastewater pumps



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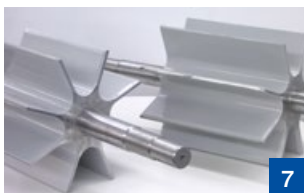
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- 1 Seamless rubberlike lining for maximum erosion protection
- 2 Elastomeric heavy duty wear protection for pump casings
- 3 MetaLine 785 protects wastewater pumps on cruise ships
- 4 No matter what size – MetaLine has hardly any restrictions
- 5 Saltwater corrosion protection with long-term warranty
- 6 Tested and proven for any size of pumping systems
- 7 Dry & wet material feeding is the main focus of MetaLine

Propulsion-Drives

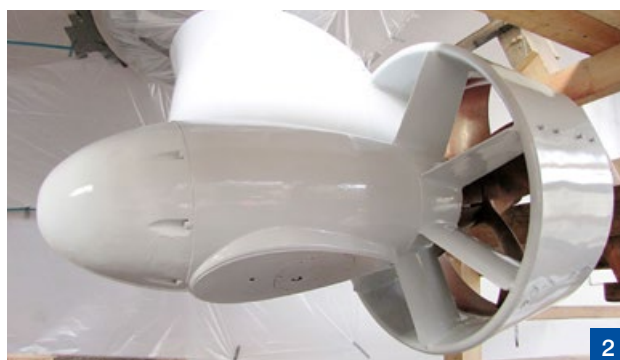
Sprayable elastomeric coatings to protect against impact and high-fluid flow forces. These rubberlike linings create a completely seamless and extremely smooth surface which provides increased efficiency

Fields of application:

- propulsion systems
- kort nozzles
- thrusters
- Z- / L-Drives
- jet propulsion drives
- Voith-Schneider® propellers



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References and Movie/Photos:
Maersk Nottingham

- 1 MetaLine's elastomeric technology – no chance for impact
- 2 Smooth surfaces to fight against cavitation and turbulences
- 3 MetaLine coatings – designed for immersion purposes
- 4 Electrical insulation properties prevent galvanic corrosion between steel & stainless steel
- 5 Fluid flow, performance & cost optimization with MetaLine
- 6 State-of-the-art seamless elastomeric spray linings

On-Deck Applications

Sprayable, decorative elastomeric coatings to enhance slip protection on board. The seamless and smooth film finish promotes cleanability as well as improving hygiene for food processing and storage

Fields of application:

- food fridge areas
- fish processing areas
- fishnet weights
- rescue equipment
- helicopter flight decks
- skirting boards
- bulwarks
- shackles
- handrails / handles
- rope-end sealing



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- 1 Impact-resistant long-lasting on-deck corrosion protection
- 2 Fish processing areas & cold storage cells covered seamlessly
- 3 Elastomeric saltwater protection for the Offshore & Navy
- 4 A safe technology at sea – sprayed rubberlike properties to enhance lifetime
- 5 Bulwarks, anchor lockers, hatches with sound-deadening spray lining
- 6 Decorative slip protection on steps, bathing ladders, gangways ...
- 7 Off-shore exploitation service equipment requires durability – ask MetaLine

Rudder-Systems

Trowelable or sprayable elastomeric repair compounds to resurface worn metallic structures. Applicable in every desired thickness. Highly elastic and extremely resistant against severe cavitation forces

Fields of application:

- rudder horns
- rudder blades
- side thrusters
- retractable fin stabilizers
- bilge keels



- 1 MetaLine – feels at home in highly abused areas
- 2 MetaLine in dry-dock operation – no vulcanization required
- 3 Seamless and tensionless elastomeric lining on-site
- 4 Rudder with a final topcoat after MetaLine 785 partial coating
- 5 Double rudder cavitation protection for a FREMM multipurpose frigate
- 6 The FREMM NORMANDIE on full speed again after a MetaLine Treatment
- 7 Reconstruction of the missing structure and preventive protection
- 8 Cost-optimized problem solutions „made in Germany“

Valves / Fittings / Tubing

Sprayable elastomeric coatings to protect the interior and exterior against saltwater corrosion. Resists chemical exposure within a pH range between 3 and 11. Non-stick characteristics are present. Available in 7 different colors

Fields of application:

- butterfly valves
- stop valves
- compensators
- spigots
- throttle valves
- gaiters
- fireplugs
- fire-extinguishing water supply pipes



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- 1 Large valve after elastomerisation with MetaLine 785
- 2 Firefighting systems during the protective coating process
- 3 Even stainless steel can be improved with MetaLine ...
- 4 2 mm MetaLine 785 elastomeric lining inside this ball valve
- 5 Slurry stop valve after overhaul with MetaLine products
- 6 Saltwater valve fully encapsulated with MetaLine 795
- 7 MetaLine is non-toxic in use – however a protective mask should be worn anytime

Propellers Subsea Systems

Sprayable elastomeric coatings to protect against cavitation, bio-corrosion and fouling. Low weight material characteristic with a density of 1.05 g/cm³. Tensionless high bond to many different substrates. Changes the underwater signature of subsea operating vessels

Fields of application:

- sportboat propellers
- steven systems
- ship propellers
- controllable-pitch propellers
- submarine screws
- submarine antennas
- submarine rubber hull repairs
- tidal turbines



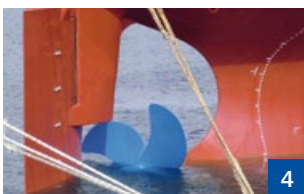
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- 1 MetaLine changes the signature of subsea equipment
- 2 Midsize ship propeller during the coating process
- 3 MetaLine – elastomeric linings do not require hot vulcanization
- 4 This might be the future of luxury vessel propulsion protection ...
- 5 Rubberlike coated aluminium propeller – suitable for saltwater
- 6 MetaLine coated steven bracket on a coast patrol boat
- 7 ICCP cathodic protection is enhanced and secured



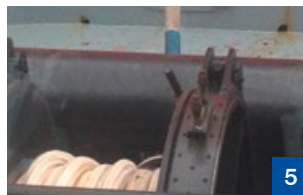
Hawser & Tow Rope Protection

Effective hawser protection is of importance for safety-related and economic reasons. High-performance tow ropes with interwoven Dyneema® protective tubes cause costs of up to 400 EUR / per meter run.

Partial coating with MetaLine 795 offers protection, i.e. fibers are penetrated and prevented from wearing out while preserving the rope structure at the same time. Low static friction enables rope movements in the fairlead and in the trestle. By different color combinations, optical warnings can be provided. However, a protective coating may only be applied if the rope core has not been damaged yet.

Fields of application:

- Plastic or natural fiber ropes (no wire)
- Hawser sections in the area of fairlead and trestle
- Repair of already damaged hawsers
- Protection of the spliced in eyes



Reference and Video/Photos:
Kotug - Towage, Hamburg

- 1 Professional onboard solution which can be implemented in under 30 minutes
- 2 More efficient and time-saving than conventional splicing in of a protective cover
- 3 Cutting off loose pieces/ends and flame-scarfing protruding fibers ...
- 4 ... sticking in the repaired area with approximately 20 mm offset and injecting approximately 2 mm of MetaLine 795
- 5 A 70 cm long repaired section (Ø 90 mm) requires only 0.5 kg of MetaLine 795
- 6 Reeling can be carried out already after approximately 3 hours. Operational release is possible after 1 day (20 °C)

Exploitation / Dredging

Sprayable elastomeric coatings to repair eroded metallic or rubber parts. Up to 50 times as resistant as epoxy-ceramic repair compounds. Suitable for sand and gravel up to 25 mm screening size

Fields of application:

- pump impellers
- pump casings
- draft tubes
- suction strainers
- floating equipment
- floating pontoon
- barges



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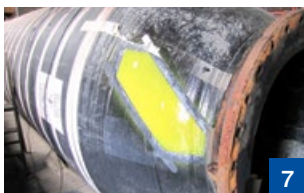
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- 1 Dredging impeller with a 25 mm thick coating of MetaLine 785
- 2 Reinstallation of a MetaLine-coated dredging pump casing
- 3 Large pump casing protected with MetaLine 785 as OEM solution
- 4 Elastomeric protection inside a longitudinally split elbow pipe
- 5 Repaired rubber floating pipe for sweetwater gravel extraction
- 6 MetaLine offers flow-optimized, smooth pump geometries
- 7 Dredging hose repaired to fight wear & tear, saltwater and UV-impact

Watersports Equipment

Brushable, trowelable or sprayable elastomeric products to repair or protect sensitive synthetic naval surfaces. A low coefficient of friction is available in order to ease launching and retrieving of sports equipment

Fields of application:

- jet skis
- kayaks / canoes
- diving equipment
- aluminium hulls
- seats / benches
- bilge sealings
- centreboards / keels
- anchor lockers
- bathing ladders / gangways
- slipways
- boat trailers
- rental equipment



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- 1 Life enhancement and value preservation for boat owners
- 2 Marine growth takes place – but the difference is easy removal
- 3 Repair / renewal coating of PE-foam rental equipment
- 4 Aluminum floating equipment coated with “liquid rubber”
- 5 Glide-enhancing coating to ease retrieval of water jets
- 6 Impact-resistant sealing & scratch protection beneath the water line
- 7 MetaLine increases the lifetime of propellers but not their efficiency