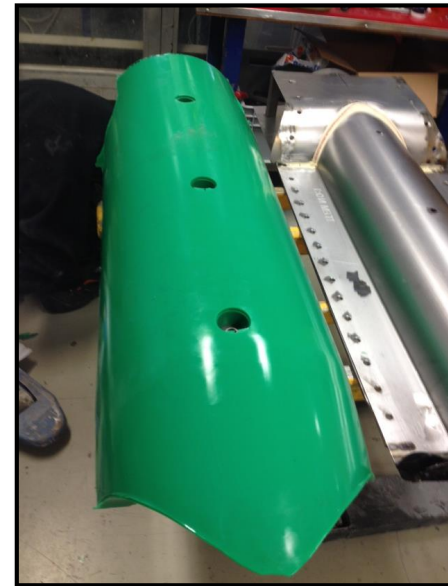


Noise and shock absorbing, gentle and safe storage



Semek supplies specially designed, molded plastic products in polyurethane.

- Reduction of noise and vibration.
- Gentle storage of sensitive equipment.
- Shock absorption, weight reduction and corrosion protection.
- Good load bearing properties, and low degree of permanent deformation when loaded.
- Elastic in large temperature range; - 80 ° C to + 80 ° C
- Clearly visible color.
- Well-suited for subsequent machining.
- Very high resistance to abrasive wear.

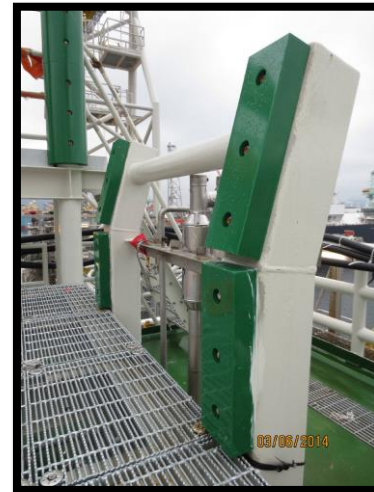


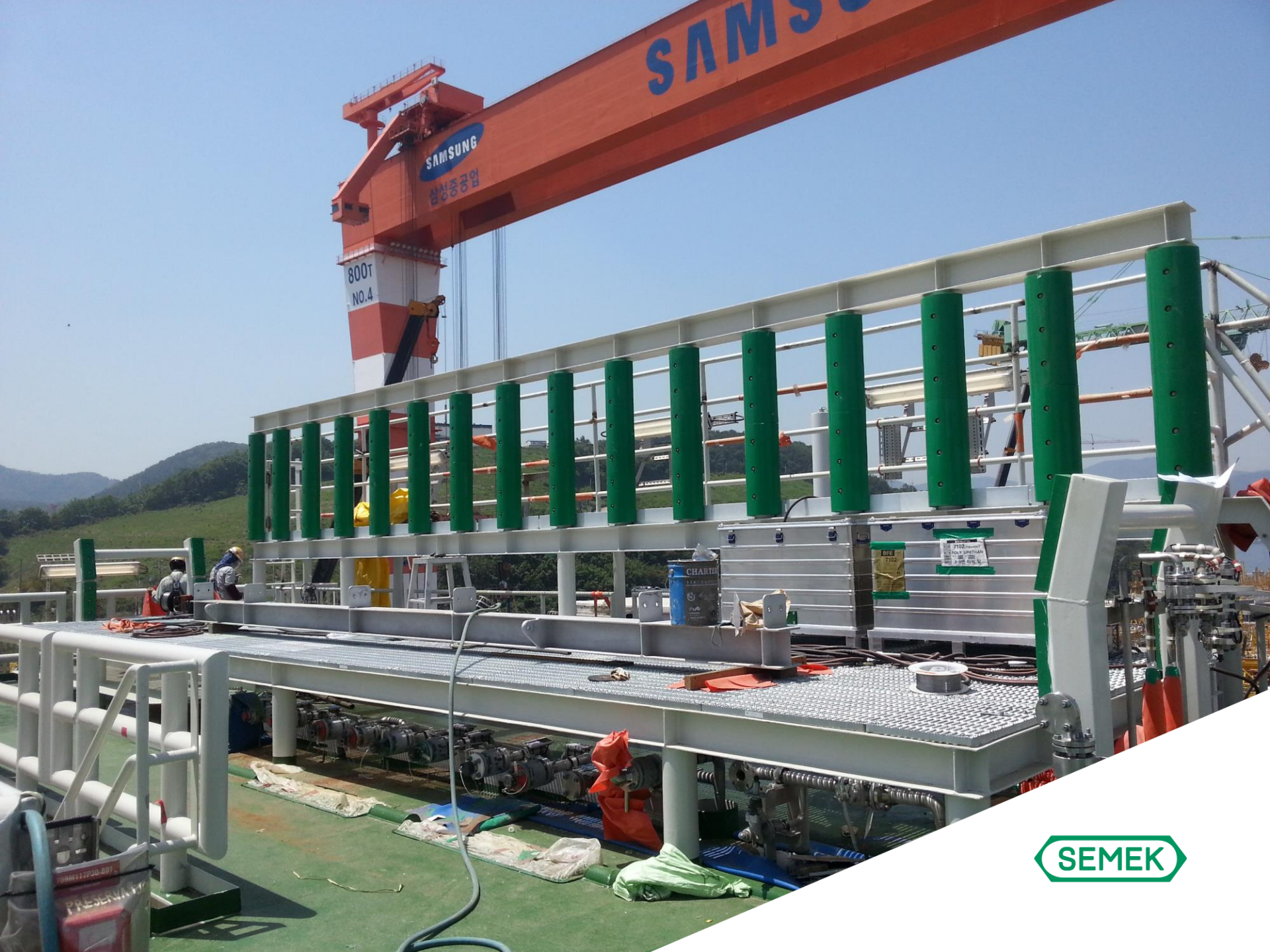


Bumpere

Valemon; Bumper guide

- Order delivered Valemon in March 2014.
- Customer: Samsung Heavy Industries





SAMSUNG

SAMSUNG
삼성중공업

800T
NO.4

CHARTER

BPE

SEMEK



Valemon

Challenge:

Mechanical strokes to steel structures may cause damage to both the structure as well as the surface treatment and to the equipment that is being loaded and unloaded. This generate noise that is a health hazard and which propagates further in the platform.

The solution in this application was through 3D design and working with the customer to construct bumpers that enveloped the structure in a manner such that the strokes were attenuated, and damage to the structure, surface and material thus avoided.

Solution:

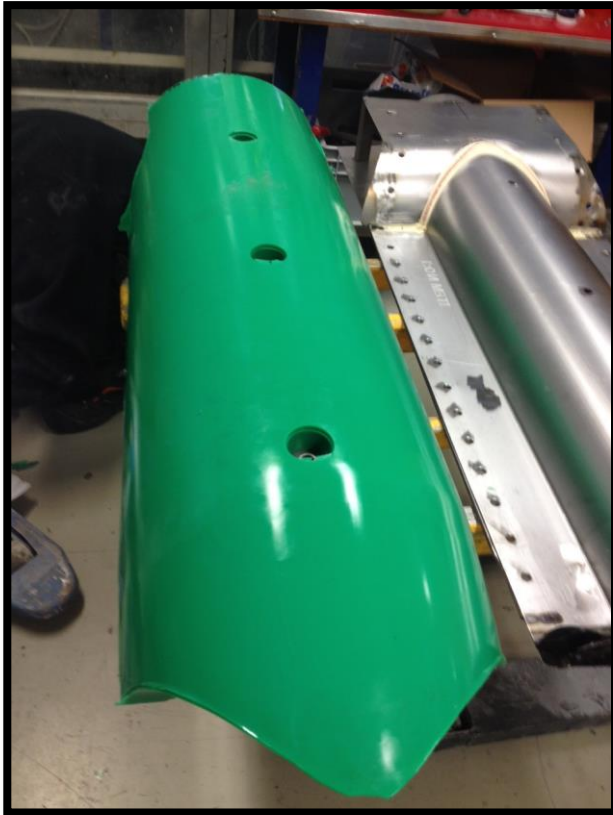
The product is a net benefit in the form reduced maintenance, reduced damage to material and reduced harmful noise.

The fact that the bumpers have a clearly visible colour is a great benefit for those who perform loading/unloading operations. Especially when there is reduced visibility. The products are colored throughout and hence will not lose their colour.

The product has extremely long durability.

Bumpers can be designed according to customer's desires regarding the shape, function and colour.

Gina Krog; Safety Barrier



- Order to Gina Krog delivered April 2016.
- Customer: Daewoo Shipbuilding & Marine Engineering Co.; DSME





Drilling Riser Support

Heidrun; Drilling Riser Support



- Order to Heidrun delivered July 2013.
- As of spring 2018, Semek has on request developed Drilling Riser Support for level 2- This is now being testing.
- Customer: Odfjell Drilling Management





Heidrun

Challenge:

It was used Drilling riser support / litter in oak for a while. This was not a satisfactory solution. There was a desire for improvement.

Reference:

"Drilling Riser Support - An idea of something better. Subsequent cooperation with Semek and a result that was of great benefit to both employees and equipment. "

Jørn Terje Olsen, Material Coordinator, Odfjell Drilling, Heidrun

Solution:

The customer had good ideas, and through close dialogue through sketches and 3D drawings, Semek produced a innovational product. The product has functional design, visible colour and much longer durability than the existing material.

• Some deliveries /customers

- **HEIDRUN/GULLFAKS, 2012** Inside block for crane cradles to the West / East crane **Statoil ASA**
- **RIGMAR, 2013** Inside block for Crane cradles **COSL Drilling Europa AS**
- **VALEMON, 2013** Inside block for Crane cradles **Nov / National Oilwell Varco**
- **HEIDRUN, 2013** Drilling riser support. **Odfjell Drilling Management**
- **VALEMON 2014** Cradles and inside blocks for storage of pipes to firewater-/seawater pumps. **ScanTech**
- **VALEMON 2014** Cradles on trolley **ScanTech**
- **VALEMON 2014** Guide Bumper and Polyurethane Pad **Samsung Heavy Industries**
- **HEIDRUN, 2014** Sub support on alupallet **Odfjell Drilling Management**
- **OSEBERG A og B, 2015** Inside block for Crane cradles **Statoil ASA**
- **GINA KROG, 2016** Safety Barrier **DSME**
- **GULLFAKS A, 2016** Craneboom protection **STATOIL**
- **KVITEBJØRN, 2017** Craneboom protection **STATOIL**
- **DEEPSEA STAVANGER, 2017, CRANE 1** Inside block for Crane cradles **ODFJELL INVEST AS**
- **DEEPSEA STAVANGER, 2017, STYRBORD** Inside block for Crane cradles **ODFJELL INVEST AS**
- **DEEPSEA ABERDEEN, 2017,** Inside block for Crane cradles **ODFJELL INVEST AS**
- **JOHAN SVERDRUP, 2018,** Inside block for Crane cradles, **PALFINGER MARINE NORWAY AS**



Polyurethane is excellent!

- Reduces vibration and noise.
- Shock absorbent.
- Good option for weight reduction.
- Corrosion protection.
- Elastic in a large temperature range; - 80 ° C to + 80 ° C.
- Good load bearing properties, and low degree of permanent deformation when loaded.
- Can be used as base material for different composites.
- Specific gravity can be varied with different additives.
- Can be used as spring element.
- Hardness can be changed.
- Friction coefficient can be changed.
- Very high resistance to abrasive wear.
- Good adhesive properties.
- Optional permanent color.
- Well-suited for subsequent machining.
- Very strong adhesion to other materials such as metal, plastic, etc.



We are ready to cooperate

About Semek:

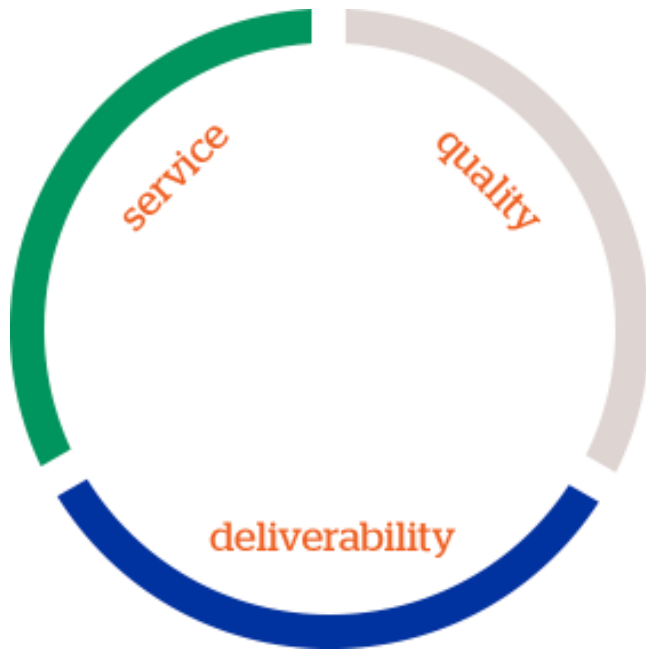
- We have substantial accumulated experience as a problem-solver and supplier to the industrial sector. Customized solutions with polyurethane is our niche. The customer's needs and requirements are what is decisive in the design and functionality of the final product.
- We possess expertise about the benefits of using polyurethane, but also about its limitations. We customize solutions that make the best match with a customer's needs.
- Our focus is on safety, quality, capacity to deliver and service.



petroarctic



Our goal:



To develop new products with **superior properties** that create value for our customers, through new and better solutions.



Sub-support

Heidrun

Challenge:

Previously, the subs were stored on on pallets of wood. It was cumbersome to strap. There was too much manual lift on the subs. Desire for good colour, long shelf life and low weight.

Solution:

Received a sketch and had a good dialogue with the customer along the way. 3D drawings were discussed.

Sub support in green polyurethane with design for safe storage of the equipment. Using this new product workers easily put on straps without manual effort.

Designed to be easy to handle and with minimal weight. Semek proposed to deliver sub support on aluminum pallet.

This was highly appreciated by the customer.



SEMEK



Referanser:

"This is the way to save the subs on the pallet! Easy to put on fiber strap / lift cap when transporting. Avoiding manual lifting and safeguarding high security by logistics in general. "

Jan Kåre Hofsøy - Coverage Operator - Odfjell Drilling, Heidrun

"Among our 400 member companies, SEMEK is an innovative supplier who quickly develops new forward-looking solutions within the oil and gas sector. We have seen several Semek products, which we are sure will provide large-scale utilization benefits offshore, nationally and internationally. "

Kjell Giæver - Director - Petro Arctic

Storage of pipes to fire water-
/seawater pumps



Valemon; Cradles and inlay for storage of pipes to firewater / seawater pumps



- Order to Valemon delivered 2014.
- Customer: Scan Tech





Challenge:

- Need for safe handling and careful storage of essential equipment.
- Limited available area for storage.

Solution:

- The product saves space by allowing the tubes to be stored vertically in a rack. The rack is secured to the platform deck.
- The product meets the Hse requirements.
- Easy manageable with crane without the need for intermediate storage.
- Protects the essential equipment in a gentle way.
- This solution is durable.
- Tailored to the desired pipe size and can be adapted using inlays.

Inlay Crane Cradles





Valemon

Challenge:

Experience from other platforms that an undesired event was arising. Material in the inlay in the cradle has traditionally been of oak.

Bits of oak were coming loose due to mechanical effects from the cranes.

Bits had fallen down and could have created dangerous situations. The desire thus was to have a durable material for the inlay in this new cradle.

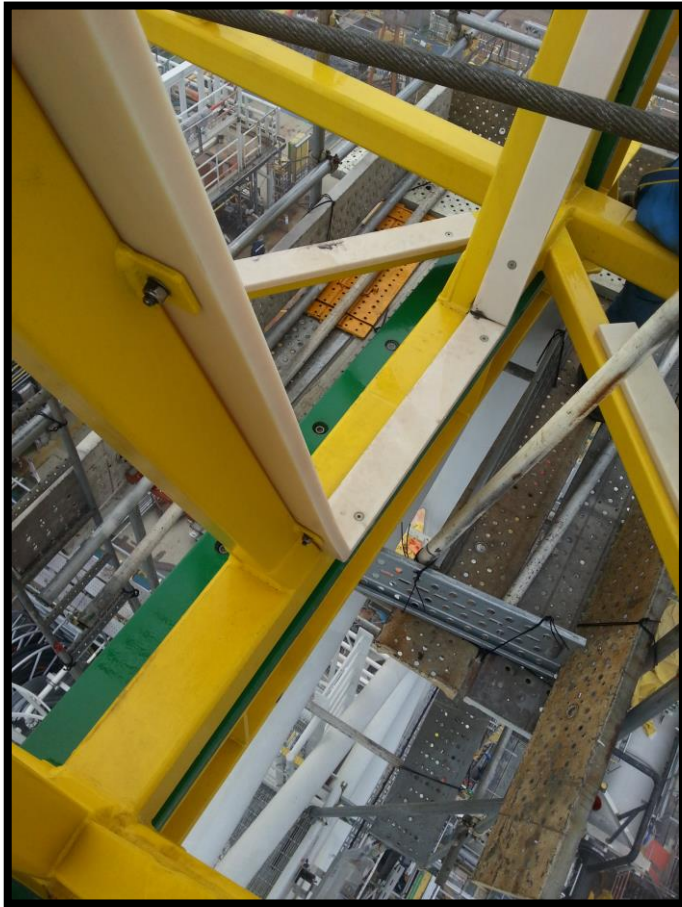
Solution:

We designed a proposal in 3D after receiving a dimensioned sketch. The design was completely clarified. The product was to fit in with a crane cradle already produced.

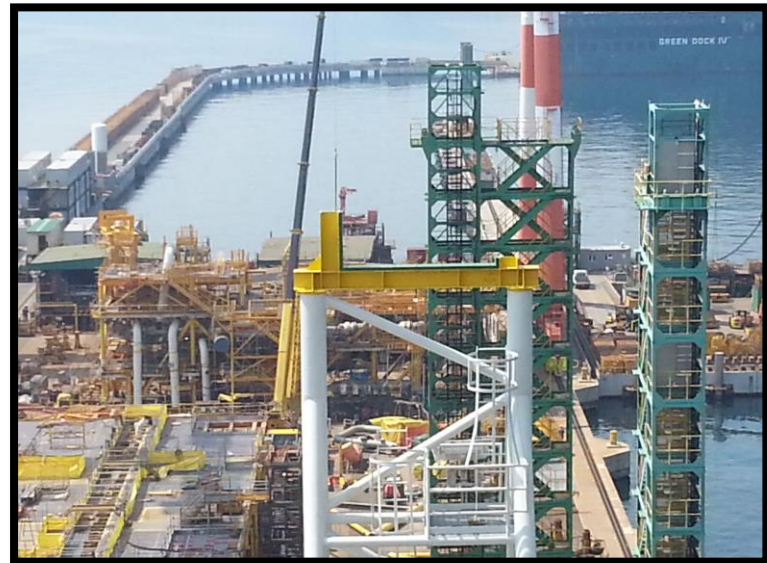
The drawings were approved, and we produced the inlay for the cradle in polyurethane.

This will be a permanent good solution, since the polyurethane inlay was moulded in entire parts, and it will not break apart or be deformed by mechanical loads.

Inlay crane cradles



- Deliveries delivered from 2012 - 2018.
- For krankrybber at: Heidrun, Gullfaks A / B / C, Valemon, Rigmar, Oseberg A / B, Kvitebjørn, Deep Sea Stavanger, Deep Sea Aberdeen, Johan Sverdrup.
- Customers: Statoil, NOV, Cosl Drilling Europe, Palfinger, Odfjell Invest.





SEMEK

Quality Control:



- Semek have quality assurance system based on ISO 9001: 2008.
- We have a strong focus on quality in all of our production.
- Based on the customer's specification, we control the products with regard to: dimension, durability, elasticity, colour, shape and surface.
- For advanced testing we have access to the testing laboratory at our raw material supplier.

We customize your product

Bring us your challenge!

- We'll find a solution!



Examples of our products:

- Pipe support
- Inlay for Crane Cradles
- Edge protectors
- Cradles and inside blocks for storage of pipes to firewater/seawater pumps.
- Cradles on trolley.
- Drilling Riser support.
- Variations of hammers.
- Sub support on alu.pallet
- Bumpers.
- Various products for replacement of other materials.



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