



**BEERENBERG  
BENARX® PRODUCT CATALOGUE**

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# Our company

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**Beerenberg designs, produces, and delivers high-tech insulation products for the global Oil & Gas industry. The Benarx<sup>®</sup> product series is a range of bespoke engineered fireproofing and insulation solution that meets criteria for passive fire protection, cryogenic spill protection, thermal, and acoustic insulation spill based on developed products, and in the combination with other insulation materials.**

The Benarx<sup>®</sup> product range offers unique properties with regards to truly removable and reusable passive fire protection, heat conservation, acoustics, corrosion under insulation (CUI), and robustness. The prefabricated insulation products offer the lowest life cycle costs (LCC) and save valuable space and time during installation. They provide unique design properties to simplify logistics and improve HSE performance. The Benarx<sup>®</sup> insulation products have a life span that far exceeds the traditional insulation solutions in the market.



The Benarx® product series has been developed in close co-operation with key clients and suppliers, as well as institutions such as RISE-Fire Research, DNV, Exova, BRE, Peutz Laboratories, SINUS, the Kiwa Technological Institute, research institutions, GexCon, and Lloyds (type approval). The solutions have been thoroughly tested and approved to a vast range of relevant specifications/standards.

Corrosion under insulation (CUI) is one of the biggest challenges for the international Oil & Gas industry. Strict criteria for effective and maintenance solutions will significantly help to reduce these challenges. The Oil & Gas industry includes many ageing platforms and onshore facilities. Exceeding their design lifetime allow them to continue to operate in many more years to come.

Current conventional insulation and maintenance systems, together with CUI detection technologies, are not optimal for the challenges facing the industry. CUI therefore represents one of the biggest challenges in terms of safety, cost and stable production. Beerenberg have focused specifically on mitigating CUI during the development of Benarx® product series.

Benarx® product series is a fully owned product brand within Beerenberg.

# Sustainability as a fundament for our choices

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**Our main priority is continuous improvement of safety of everyone involved in our projects. Simultaneously, our products and methods are most accommodating for the environment.**

Beerenberg believe that all injuries and occupational diseases or ailments, as well as damages on environment and materials, are preventable. Therefore, we regard our HSE work as a long term and imperative contribution to the company's economy, reputation, and further growth. This work also includes inevitable requirements to quality and a core which permeates everything we do.

Beerenberg has a high focus on sustainable operation, and we continuously search for new technology that contributes to less impact on nature and personnel. Our goal is simply to be the best for health, environment, safety, and quality.





# Our approach to sustainability

By increasing the degree of factory prefabrication, the Benarx® product series reduces the environmental footprint of the material used and develops solutions that improves HSE on site. A growing focus is also taking place on increasing the degree of energy and CO<sub>2</sub> optimized insulation systems to help clients design insulation systems that provide energy-cost-optimized or CO<sub>2</sub> optimized thicknesses.



## Environment

Prefabrication:

- Reduce chemical and dust emissions on site
- Reduce sandblasting activities and microplastic emissions by using prefabricated fire-protection



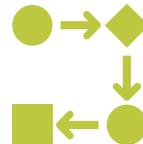
## Health and Safety

- Prefabrication of PFP & paint in factory reduce workload and chemical exposure to personnel on site
- Adopting non-metallic insulation materials to reduce cut-injuries and CUI associated risk from coating damages



## Climate

- Reduce need for transport and waste generation by moving to more prefabricated solutions
- Help clients design and choose more energy optimally designed insulations thicknesses and solutions
- Improve energy efficiency internally



## Waste/Recycling

- Continually search for and adapt insulation materials made from recycled, biodegradable or low-impact raw materials.
- Start improving end-of-life sustainability of our products and look for possibilities for recycling products or material after service

# Catalogue icons

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## Passive Fire Protection

Passive Fire Protection is today an essential part of all Oil & Gas and petrochemical plants. The presence of highly flammable fluids and explosive gasses, in confined spaces and locations where people have limited escape routes, poses a significant risk in the industry.

Removable Benarx® Epoxy products protect critical equipment up against the fire to ensure the equipment are functioning properly during the fire according to designed time. This is where Passive Fire Protection (PFP) plays an important role. If an oil or gas spill accident has occurred and ignited, it's essential that the integrity of load bearing structures and pipes carrying hydrocarbons or fire fighting fluids, are protected from failure and prevented from further escalating the fire scenario.



## Thermal Insulation

The Process industry must handle a wide range of temperatures, from super-heated steam to cryogenic Liquid Natural Gas. Thermal insulation plays an important role in preserving the temperature of the media, reducing the energy loss or avoiding condensation and external ice formation on cold media.



## Acoustic Insulation

Health, Safety and Environment (HSE) is an important factor in the work environment. One of the important aspects of working environment is noise exposure. It is widely acknowledged that high noise levels increase the risk for developing chronic diseases such as tinnitus and hearing loss.

The working regulation in a noisy environment limits how long personnel can work in the area, depending on the noise level. This could result in inefficient work processes as the amount of available personnel offshore is limited due to high cost, limited bed and heli-transport capacity. Reducing the noise levels with insulation is therefore a necessity and increases cost efficiency as workers can work longer in areas where noise level is reduced.



## CUI Detection

Corrosion Under Insulation (CUI) is a major risk factor in Oil & Gas producing facilities. The integrity of load-bearing structures, piping and process equipment is essential as a potential leak or breakage can have catastrophic results.

# Catalogue icons

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## Cryogenic Spill Release (CSP)

Any facility using LNG needs a system to ensure the safety of people, assets and the environment. As well as being flammable, the boiling point of LNG at atmospheric pressure is  $-162^{\circ}\text{C}$ . Handling a cryogenic liquid at this temperature requires safety consideration in the event of spill. If the steel is cooled dramatically, its mechanical properties will be changed. Exposed to cryogenic liquid, steel goes through a ductile to brittle transition and its temperature decreases. This reduces its fracture toughness, increasing the risk of brittle fracture.

Benarx<sup>®</sup> Epoxy products have been tested effectively up against CSP (ISO 20088:1-3:2018) for 1 hour duration followed by jet-fire test for 1 hour (ISO 22899) with very good results. Special configuration of Benarx<sup>®</sup> Epoxy product with Aerogel protects the object up against a combination of PFP/CSP or CSP-solo.





# Pipe and Vessel Insulation Products

Pipe insulation represent an essential part of Asset Integrity in Oil & Gas production and processing facilities. Beerenberg delivers a large range of both in-house developed and patented Benarx<sup>®</sup> pipe insulation products together with traditional pipe insulation products that covers standalone insulation classes or combination classes within fire, thermal and acoustic requirements.

The Benarx<sup>®</sup> products are prefabricated under controlled and optimized conditions at our factories. This allows us to reduce installation time significantly. Also, we avoid dust and chemical solvents on site during installation of the product.



# Oryza-Sil-650 Aerogel Blanket



- Made from recycled materials
- Tested according to ASTM C1728
- EN 12667 Thermal conductivity
- BS 476 Part 4 Fire Test on Building Material
- ISO 22899 Performance in Jet-fire
- GB/T 17393-2008 Stress Corrosion Test On Austenitic Stainless Steel
- GB/T 34336-2017 Nanoporous aerogel products for thermal insulation
- GB 8624-2012 Classification for burning behavior of building material
- ISO 15665 Acoustics - Acoustic insulation for pipes, valves and flanges

**Oryza-Sil-650 Aerogel Blanket is a flexible thermal insulation material made of aerogel, partly from biowaste, and a variety of reinforcing fibers through a special manufacturing process. It is a safe and environmentally friendly insulation that increases the effectiveness of space usage.**

This product is widely used in industrial pipelines, petroleum/petrochemical industry, vessels, home appliances, construction, and others, because of its excellent performance in energy saving and emission reduction. Oryza-Sil-650 Aerogel Blanket has low dust and excellent thermal insulation performance (fire resistance in grade A). Also, it is easy to construct and increases the effectiveness of space usage.

# Oryza-LTG Aerogel Blanket

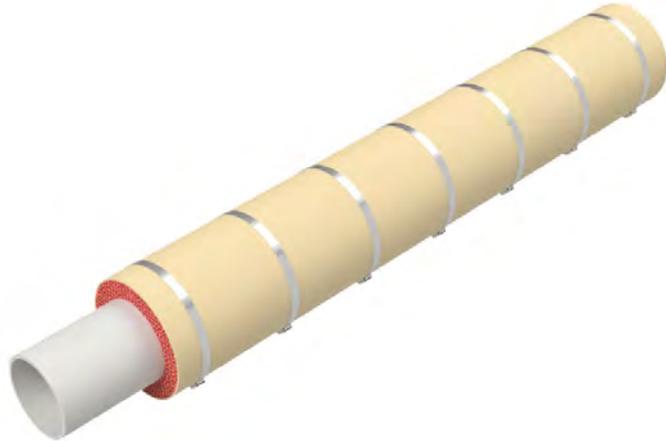


- Environmentally friendly – a natural green product
- Tested according to ASTM C177 – Thermal Conductivity
- Tested according to ASTM C1763
- Tested according to ASTM C165
- Tested according to ASTM C1101
- HSE friendly – very low dust emission
- Extremely hydrophobic and breathable
- High temperature tolerance
- Fire resistance in grade A

**Oryza-LTG Aerogel Blanket is a flexible thermal insulation material made of aerogel, partly from biowaste, and a variety of reinforcing fibers through a special manufacturing process. The resulting composite material is known to possess good flexibility, low thermal conductivity, excellent mechanical strength and outstanding water repellency.**

With these superior properties, the Oryza-LTG Aerogel Blanket can be effectively used in sub-ambient and cryogenic insulation applications such as in LNG pipeline, storage or transportation. Oryza-LTG is soft and easy to install on small dimension piping.

# GRP Cladding



- Type approval by Lloyds (No. SAS F110227)
- Type approval by RINA (No. MAC343110CS/001)
- Has been developed for its fire performance, M1 NFP92-501
- Epiradiateur Test, BS476 Part 7 Class 1
- ASTM E84 Class A
- ASTM D635 (HB) RINA
- Low smoke evolution on burning with no harmful gas levels as defined by the International Maritime Organization Resolution MSC 61 (67) 1996
- Tests carried out by Warrington Fire Research and Intertek Group (Texas).

**GRP Cladding is pre-cured and shaped FRP (Fibre Reinforced Polymer). GRP Cladding uses FibaBond as an adhesive. FibaBond is an elastomeric polymer sealant with high adhesive properties.**

FibaClad has the option of being coated with Interthane 990. This is a high-performance Acrylic Urethane and is specified where the application is going to be subjected to environmentally challenging environment and/or high levels of UV. Interthane 990 is available in a wide range of colours.

# Benarx® Rivetless Cladding



- Specially developed to be used for thin insulation solutions
- Reduces risk for CUI by preventing damage from sharp edges on coating
- Cost efficient with fast installation time and improved HSE
- Ensures correct cladding diameter during installation with minimal skills required, and reduces installation time compared to traditional cladding
- Improved water-repellent design
- Various steel and aluminum qualities available

**Benarx® Rivetless Cladding is a metallic cladding system specially developed to be used with slim insulation materials. Installation is performed without drilling holes for pop rivets or screws, reducing the risk of damaging the insulation system and the underlying piping. Slim insulation systems reduce space requirements on pipe racks, enabling a more compact design with lower weight and reduced probability for clashes.**

Our modern factories are equipped with state-of-the-art automated machines which ensures high quality and cost-efficient products. The product is delivered prefabricated ready for installation and can be made to fit all dimensions and varieties within pipe insulation. The water repellent design is specifically made to reduce corrosion under insulation (CUI).

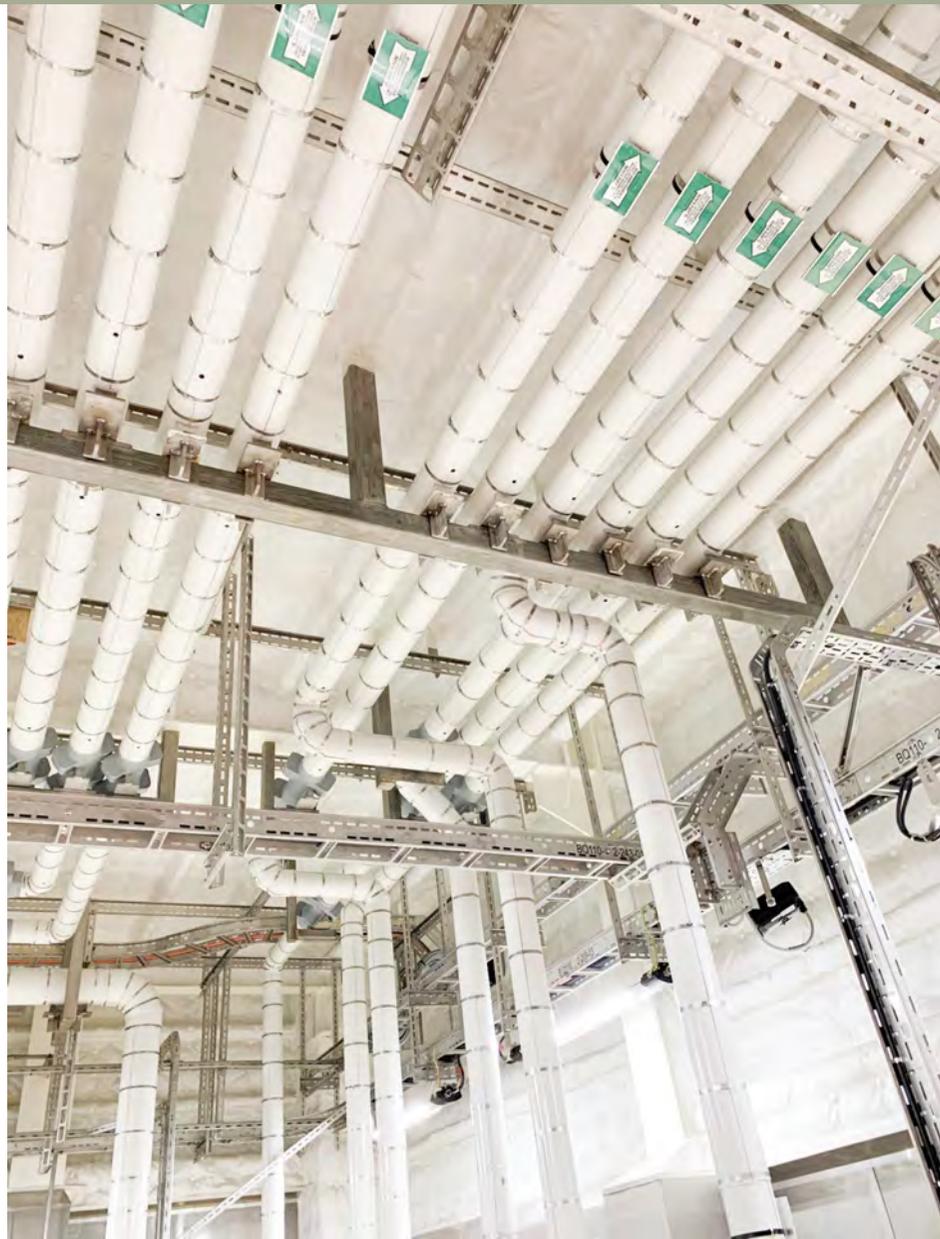
# Stenca



- Approved according to Norsok R-004
- Tested according to ISO15665 Class B and C
- DNV certified
- Weather resistant
- Short installation time
- No need for maintenance after installation. Can be moved for inspection and reused
- Pre-coated with an anti-static silicone coated glass fabric

**Stenca pipe is a thermal insulation that is waterproof and UV resistant due to its precoat, which replaces the need for steel covering. This allows for an installation time that is three times faster than cellular glass and mineral wool that requires cladding. Stenca pipe has a long durability, high compressive strength, and a non-slip surface. It resists high pressures and stays robust from external stress. Stenca pipe insulation is easy to cut into any shape, bend, T-piece, and other geometries with an ordinary saw or knife.**

Stenca pipe is made of a non-combustible product with noise reduction abilities, as well as it prevents corrosion. It is specially developed for insulation of pipes, tanks and vessels, and provides a highly efficient barrier for thermal and acoustical insulation of pipes. Stenca pipe comes in a variety of colours, including grey, red, and black.



# Benarx<sup>®</sup> Cellular Glass XP



- Tested for HC-fire according to 8S476-20 for up to 180 minutes
- Tested jet-fire according to ISO 22899 for up to 180 minutes
- Tested for High-Heat-Flux jet-fire for up to 90 minutes duration
- Certified and type approved by Lloyds Register
- Prefabricated design eliminates epoxy application on site and reduces HSE risk
- High performance product thoroughly tested for explosion loads, ageing and exposure to harsh environments
- Low Life Cycle Cost, long lifetime, fast installation

**Benarx<sup>®</sup> Cellular Glass XP is a product developed especially for fire protection of piping and vessel in the Oil & Gas and petrochemical industry. In addition to the fire protection, it also has thermal and acoustic properties which makes it suitable for a wide range of insulation classes. The lightweight and prefabricated construction makes it very installation friendly and reduces installation time significantly compared to traditional insulation systems.**

The insulation system is designed as a fully weather protective solution for the underlying pipe. If any water should penetrate the weather proofing barrier, its airgap design will enable water to drain, mitigating corrosion under insulation (CUI). The product is designed to withstand the toughest environments through extensive testing, and have certifications for various fire ratings to secure that the product meets customer demands. Can be delivered for all piping geometries and site requirements.

# Benarx<sup>®</sup> Pipeshells

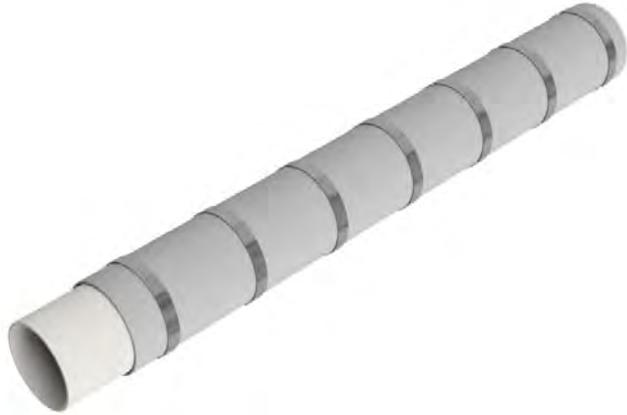


- Tested for HC-fire according to BS4 76-20 for up to 180 minutes
- Tested for UL1709 rapid rise hydrocarbon fire for up to 120 minutes
- Tested for jet-fire according to ISO 22899 for up to 180 minutes
- HHF jetfire for up to 30 minutes
- Certified and type-approved by Lloyds Register
- Tested and certified for CSP (Cryogenic Spill Protection) for up to 60 minutes for both immersion-type and jet-type scenarios
- Low Life Cycle Cost, long lifetime, fast installation and easy removal for inspection

**Benarx<sup>®</sup> Pipeshells is designed to offer the slimmest prefabricated fire protection on the piping, vessel, and in general circular objects. The thin design of the product is specially developed to avoid clashes with nearby objects around the pipe. The product can be integrated with insulation for additional thermal and acoustic insulation properties to be used for all insulation classes. It is a high-performance product thoroughly tested for explosion loads, ageing, exposure to harsh environments, and antistatic discharge properties.**

The prefabricated design with superior mechanical properties, saves valuable installation time. It is an extremely durable solution and resist mechanical impact, step damages, and shocks that would otherwise destroy traditional insulation. The product is also designed to resist the harshest environments and climate-conditions. Benarx<sup>®</sup> Pipeshells are delivered with non-metallic air-gap spacer design for mitigation of CUl on the pipe surface.

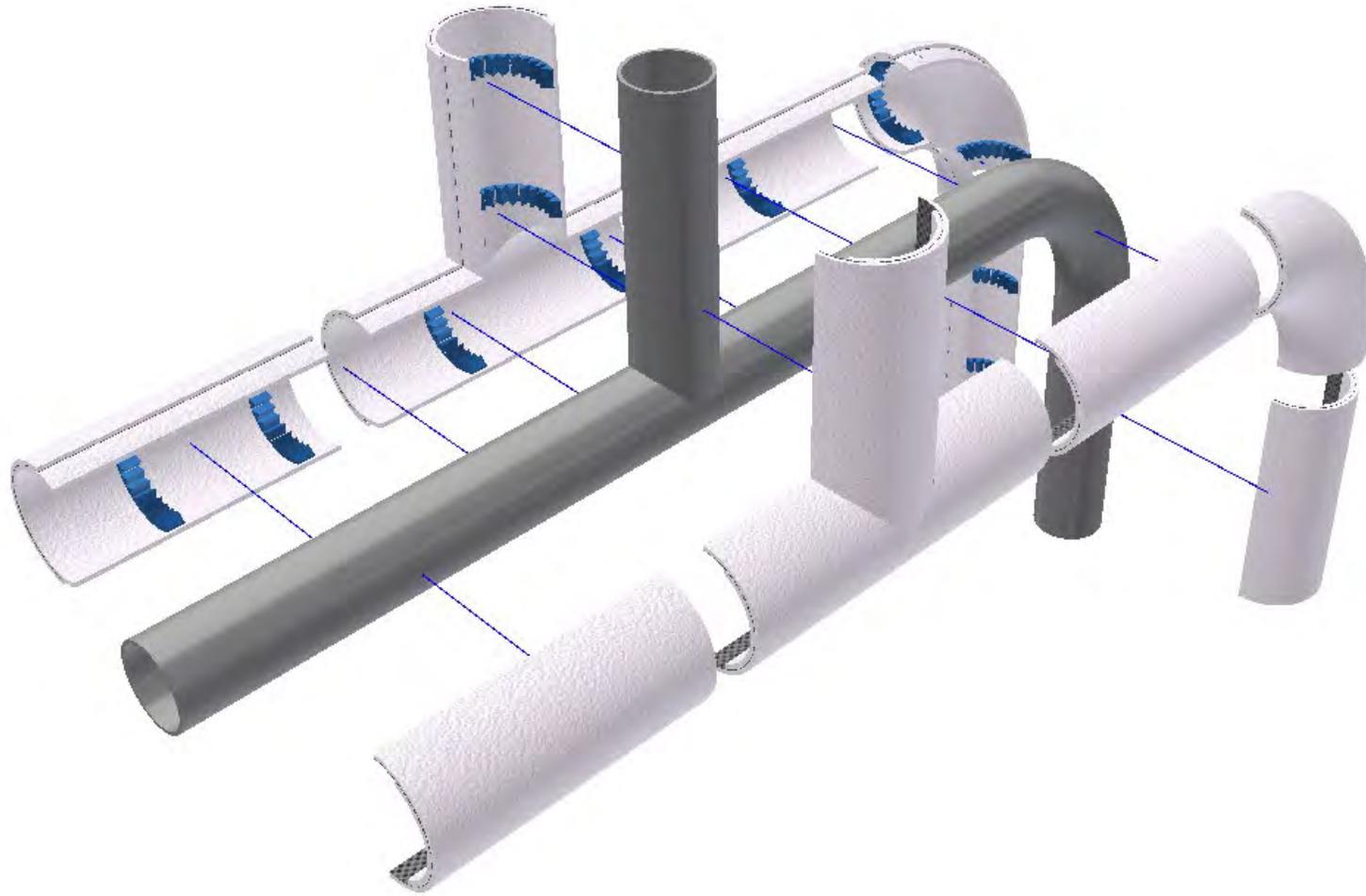
# Benarx<sup>®</sup> Flexiroll XP



- Tested for jet-fire and high heat flux jet-fire for up to 60 minutes
- Provides the thinnest available system for half-fabricated fire-protection
- Ability to order in bulk minimizes logistics work during procurement and job-setting
- Prefabricated design eliminates epoxy application on site and reduces HSE risk

**Benarx<sup>®</sup> Flexiroll XP is a passive fire protection product developed for a wide range of applications. The thin flexible product is developed to be timesaving during installation and to be used in confined areas. It is designed to be cut easily to size and is delivered in stacked rolls. Fastened with high-quality stainless-steel bands, it can be installed in any weather conditions.**

The product is a reinforced fiber mat covered in intumescent epoxy material. Benarx<sup>®</sup> Flexiroll XP withstands the toughest jet fire scenarios.



Construction of Benarx® Pipeshells



# Equipment Protection

**Fireproofing of process equipment and structures is essential in the Oil & Gas and petrochemical industry to ensure the critical equipment such as valve actuator and others are functioning in case of the fire. The Benarx<sup>®</sup> product range for fire protection of equipment and structural areas includes protection of flanges, valves, actuators, vessels, structural nodes, frame structures, pipe supports, junction boxes, instruments, cold boxes, manhole (manway), saddles, and cable trays.**

The products are compatible with our range of standard thermal insulation products and can be delivered as a total system or as a standalone product. The products are developed in-house and cover standalone insulation classes or combination classes within fire, thermal and acoustic demands.





MY-04-2812 SWL 6T

MY-04-2812 SWL 6T

# Benarx<sup>®</sup> Epoxy Box



- Tested for pool fire according to BS4 76-20 for up to 180 minutes · Tested for UL1709 rapid rise hydrocarbon fire for up to 180 minutes
- Tested for jet-fire according to ISO 22899 for up to 180 minutes
- Tested for high heat influx (350kW/m<sup>2</sup>) jet-fire for up to 120 minutes
- Certified and type-approved by Lloyds Register
- Tested and certified for CSP (Cryogenic Spill Protection) for up to 60 minutes for both immersion-type and jet-type scenarios.
- Tested for acoustic noise reduction according to ISO 15665 for class A, B and C (additional insulation required for class C)

**Benarx<sup>®</sup> Epoxy Box is a robust high-performance product designed to maintain fire integrity of the valve actuator, piping, and remaining critical equipment. It is thoroughly tested and have a proven track record in the toughest conditions from the harsh arctic to the warm tropical climate. Benarx<sup>®</sup> Epoxy Box can be custom made to fit geometries such as valves, actuators, flanges, pipe supports and steel structures.**

The prefabricated design consists of modules assembled with stainless steel skeleton covered with epoxy intumescent coating both inside and outside with eccentric locks. This combination allows for a fast and easy installation, as well as inspection and maintenance. Benarx<sup>®</sup> Epoxy Box withstands heavy mechanical impact and maintains its mechanical integrity of the system through its lifecycle. It is a versatile product that covers acoustic combination classes and can also be integrated with thermal insulation for thermal combination classes. Its prefabricated design eliminates application on site and reduces HSE risk.

# Benarx<sup>®</sup> Steel Box



- Tested for HC-fire according to IM0754 for up to 120 minutes
- Tested for jet-fire according to ISO 22899 for up to 60 minutes
- Tested for HHF jet-fire for up to 60 minutes
- Tested according to Norsok M-004
- Prefabricated design eliminates application on site and reduces HSE risk
- High performance product thoroughly tested for explosion loads and acoustic noise reduction
- Available in various qualities including stainless steel, hot galvanized, and aluzinc

**Benarx<sup>®</sup> Steel Boxes is a series of lightweight insulation products for equipment parts on the piping system. The versatile solution can be designed to accommodate various insulation materials. This includes personnel protection to avoid high temperature contact, thermal insulation integrity for both hot and cold classes (with or without electrical connections), various fire demands, or to reduce acoustic noise to the surrounding areas.**

The standard boxes are made from high quality stainless steel and connected with eccentric locks. However, other metal-qualities like galvanized steel or aluminum are also available. It is lined with preformed mechanically secured insulation materials and can be custom designed to accommodate any geometry for piping, valves and flanges. It is thoroughly tested with decades of proven track record from all over the world.

# Benarx<sup>®</sup> Structure Panels

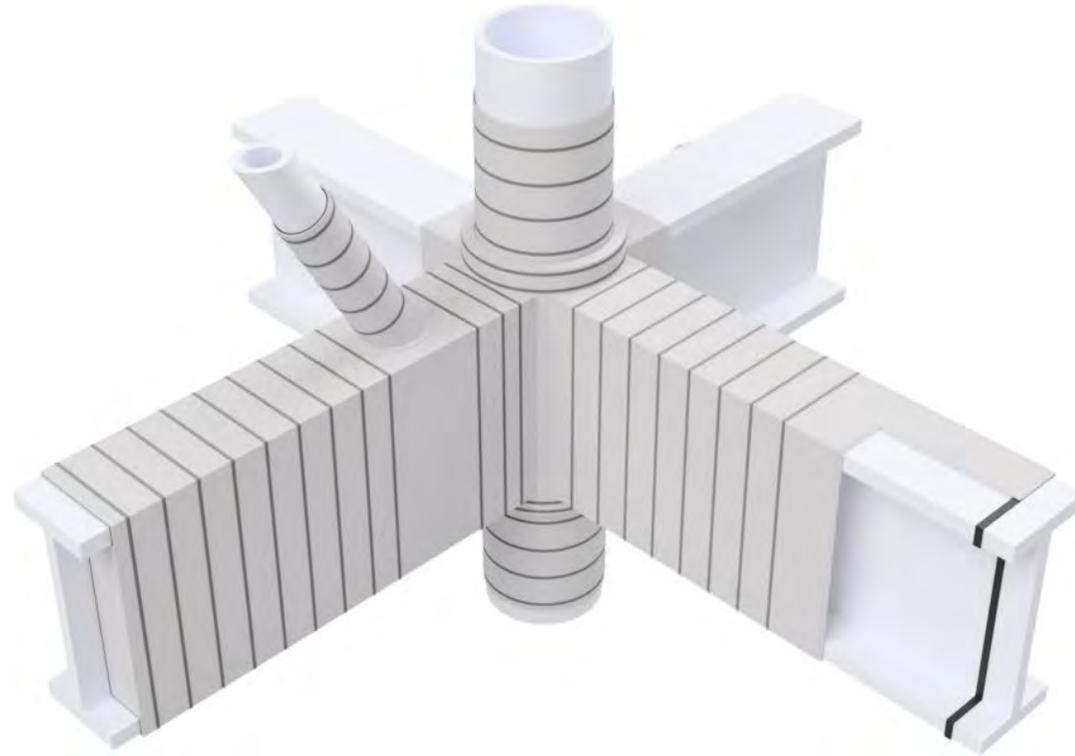


- Tested for HC-fire according to BS-476-20 for up to 90 minutes
- Tested for UL1709 rapid rise hydrocarbon fire for up to 180 minutes
- Tested for jet-fire according to ISO 22899 for up to 120 minutes
- Tested for HHF jet-fire for up to 120 minutes
- Certified and type-approved by Lloyds Register and UL
- Tested and certified for CSP (Cryogenic Spill Protection) for up to 60 minutes for both immersion-type and jet-type scenarios
- Tested according to GOST 1363-2 for up to 240 minutes
- Tested for cellulosic fire according to GOST R 53295 for up to 150 minutes

**Benarx<sup>®</sup> Structure Panel is a high performance prefabricated dry-fix passive fire protection solution specially developed to be used on the structural steel and structural inspected areas. Also, it is used for upgrading missing fireproofing or repairing damaged PFP on the structural steel in the O&G. It is thoroughly tested for ageing and exposure to harsh environments, and static electricity properties. The versatile nature of the product makes it usable for virtually any steel structures, vessel, tank or pipe rack.**

The prefabricated panels also significantly reduce the HSE impact on site. No wet spraying of PFP material, need for pre-treatment of steel or habitats on site. The panels can be installed in wet, cold, dry or warm weather conditions, again resulting in reduced installation time on site. Benarx<sup>®</sup> Structure Panel is a low cycle cost product with long lifetime, fast installation and has easy removal for inspection.

# Benarx<sup>®</sup> Structure Panels



Benarx<sup>®</sup> Structure Panels demonstrated on site construction

# Benarx<sup>®</sup> Epoxy Cable Tray



- Tested for jet-fire according to ISO 22899 for up to 90 minutes and approved by RISE Fire Research for use in same-duration hydrocarbon fire-scenarios
- Prefabricated design eliminates epoxy application on site and reduces HSE risk
- High performance product thoroughly tested for ageing and exposure to harsh environments, and static electricity properties
- Low Life Cycle Cost, long lifetime, fast installation and easy removal for inspection

**Maintaining the integrity of power, telemetry and communication cabling in an Oil & Gas facility is essential in a potential fire. Benarx<sup>®</sup> Epoxy Cable Tray is a prefabricated durable passive fire protection designed specifically for cable trays. The solution is made to be easily opened for access to the cables and then reassembled.**

Designed according to max-temperature requirements to maintain integrity of power, telemetry and communication cables. Benarx<sup>®</sup> Epoxy Cable Tray protects the cables from high temperatures and thereby secures that crucial signals maintain intact.

# Accessories

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**Benarx<sup>®</sup> accessories are developed to be used on both pipe and vessel equipment. The properties of the accessories enhance the CUI reduction properties of Benarx<sup>®</sup> products.**

CUI mitigation is achieved through water drainage or through detection of water for corrective measure to be implemented in an early stage. The two products can be delivered as a standalone products or in a combination where drainage and detection is achieved at once.



# Benarx<sup>®</sup> Preformed End Cap Gasket



- Tested and classified according to EN 13501
- Prefabricated design eliminates fabrication on site and reduces HSE risk
- High performance product thoroughly tested for ageing and exposure to harsh environments, reaction to fire, cryogenic exposure and temperature up to 230 °C
- Fully tested and qualified according NORSOK requirements
- Dimensional stability (EN 1604)
- Weather exposure and aging (ISO 20430)

**The end termination of pipe insulation is a critical point for prevention of water ingress into the insulation material. Installation of metal cladding and termination may be challenging to achieve with water ingress and potentially damaging the pipe coating due to sharp metal edges as a result. This leads to a major risk for development of CUI.**

Benarx<sup>®</sup> Preformed End Cap Gasket reduces installation time significantly compared to traditional metallic end caps. The product is preformed to the pipe dimension and insulation thickness and is therefore easy to install and does not require modifications to fit. The risk of damaging the coating system and the heat trace cables during installation is mitigated by using Benarx<sup>®</sup> Preformed End Cap Gasket. It secures waterproof end cap termination for steel cladding and therefore eliminates damages to the coating on the piping surface, which reduces development of CUI.

# Benarx® Preformed End Cap Gasket

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**Benarx® Preformed End Cap Gasket comes as molded end caps with water slope and flat end caps.**

Sharp edges of metal cladding end terminations represent a large risk of damaging the coating system and the heat trace on the pipe during installation. This risk is mitigated using the Benarx® Preformed End Cap Gasket. Due to its elasticity, it does not damage the surface coating or heat trace cable and it is easy to adjust for a waterproof fit.

# Benarx<sup>®</sup> Sniffer Tube

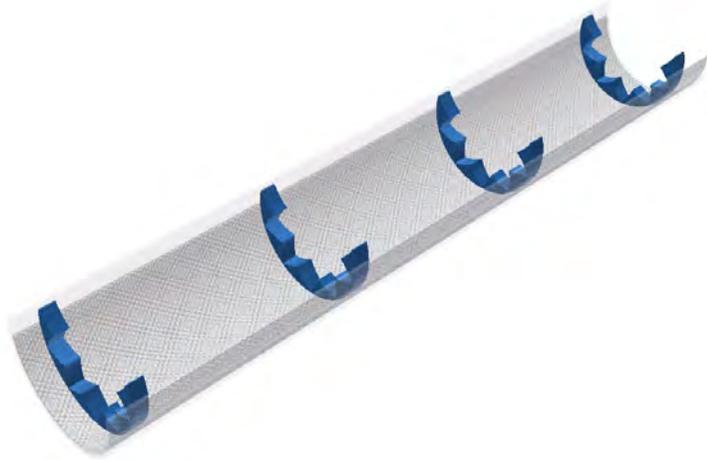


- Mitigates the need to remove insulation boxes to test for flange leaks
- Cost effective and quick installation
- Standardized sizes according to ASME 16.5 and ASME 16.47 flange standard
- Allows gas detection outside insulation
- Made for heat resistant Teflon and stainless-steel material. Can be used for operating temperatures up to 230°C

**Gas leakage in piping systems can potentially lead to fire and explosion hazard, which is a serious threat against personnel, plant, and environment. General wear and tear, CUI and installation failures are potential causes leading to leakages. Inspection area is often not easily accessible, and both inspection costs and remedial costs is generally very high.**

The Benarx<sup>®</sup> Sniffer Tube is designed to enable simple installation and easily accessible inspection of gas leakage in piping systems. Installation of sniffer tubes to monitor and test for leakage of hydrocarbons is a commonly used method to manage this risk. It can be installed directly on flanges, using flange belts for installation. Also, it is compatible with inspection glass for indication of condensate leakage. The sniffer tubes and flange belts can be delivered pre-fitted, suitable for a wide range of international piping standards.

# Benarx<sup>®</sup> Distance Band



- Fully tested and qualified according NORSOK requirements:
- Dimensional stability (EN 1604)
- Max temperature (EN 14706)
- Weather exposure and aging (ISO 20430)

**The Benarx<sup>®</sup> Distance Band eliminates damages to the coating on the piping surface and provides contact-less insulation, and therefore reduces the development of corrosion under insulation (CUI).**

The fabricated design eliminates fabrication on site and reduces HSE risk. The distance band is a high-performance product that is thoroughly tested for ageing and exposure to harsh environments. It is a high-performance product thoroughly tested for ageing and exposure to harsh environments, reaction to fire, and cryogenic exposure.

# Benarx<sup>®</sup> WUI Plug

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**Companies worldwide invest significant amounts of resources to inspect and maintain insulated pipelines to mitigate risks associated with corrosion under insulation (CUI).**

Benarx<sup>®</sup> WUI (Water-Under-Insulation) Plug is a reliable tool for draining and detecting the presence of water under the insulation, enabling inspection to focus on areas where water has penetrated the weather barrier system. Corrective measures can then be implemented at an early stage to enable cost-effective CUI maintenance.

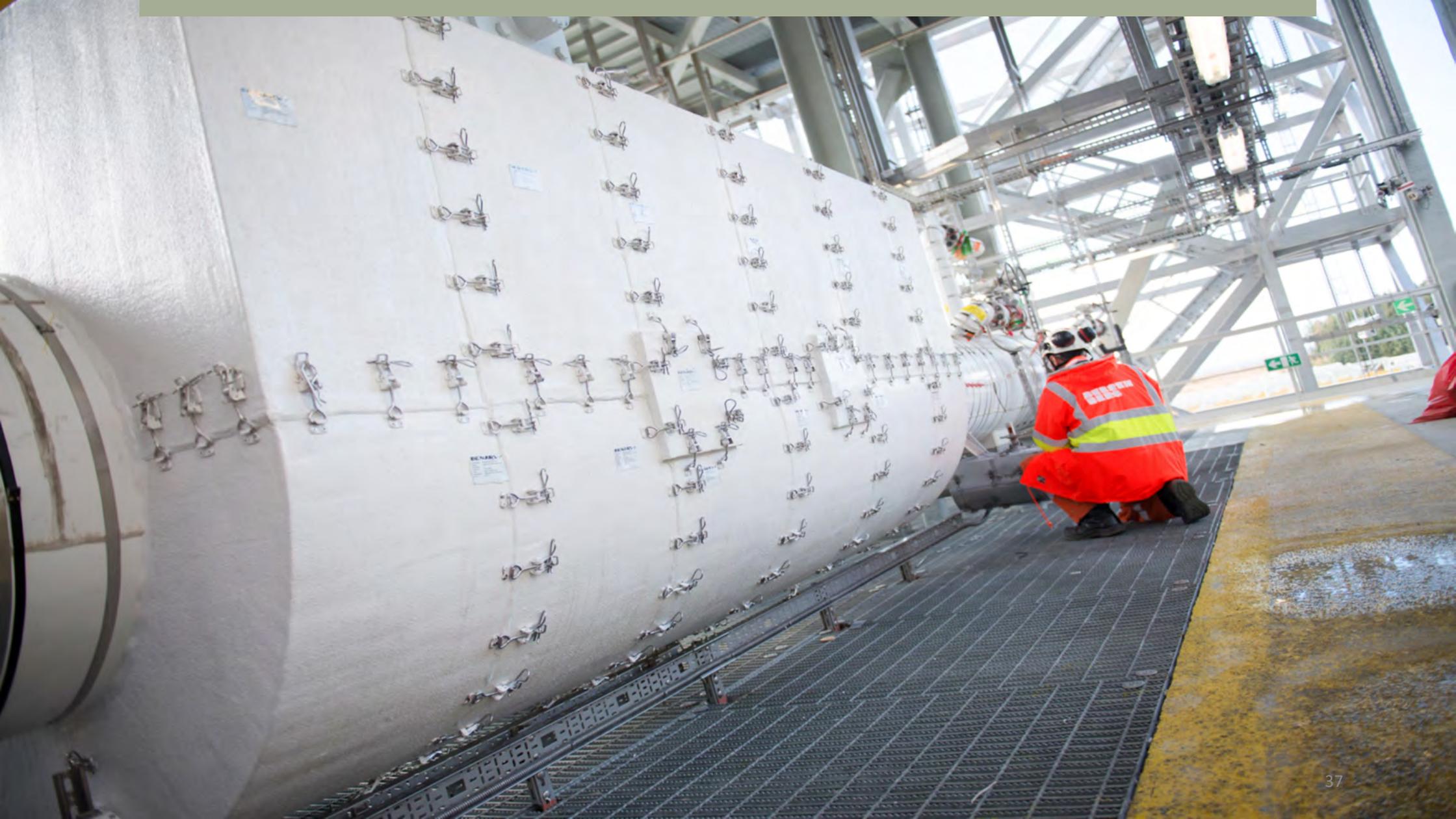
# Benarx® Fire Drain Plug

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**Benarx® Fire Drain Plug is an effective and automatic drainage system. It functions as ventilation (air-flow) with dissipate heat/gas build-up away whilst maintaining fire integrity during the fire as it will seal off the hole by swelling.**

Benarx® Fire Drain Plug is a threaded stainless-steel drainpipe containing a fire expanding seal inside. The drain plug can be mounted on various types of insulation systems, by using a stainless-steel plate with steel bands, or by fastening it with a threaded washer and nut through the drain side of the pipe or equipment insulation product.



# Benarx<sup>®</sup> 3D Scanning

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## Digital design

**Rental of Benarx<sup>®</sup> 3D scanner reduces the project costs and shorten the lead time.**

The scanner captures the situation at site and therefore greatly contributes to less errors throughout the early stages of box design. It allows standardizing of insulation design in a larger scale through dedicated design offices, and proven lower error percentage on insulation deliveries.



# Ordering Portal

**The simple way of ordering standardized products for prefab insulation, removable fireproofing, and cladding.**

## Standardizing

With minimal limitations on dimension varieties, we have standardized many of our prefab solutions, which makes it easier and faster to choose and configure the products.

## Online

Go to [www.benarx.com](http://www.benarx.com) to see and get to know our products. From there, one may easily enter the ordering portal and easily choose and configure your preferences for prefab insulation and cladding.

## Digitalization

Through the ordering portal and by visualizing the products, one may choose and configure products digitally to create requests, receive tender, and adjust. Register your projects and keep track of all your requests and orders. Automatic status updates.

[www.benarx-ecommerce.com](http://www.benarx-ecommerce.com)



# References

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**Beerenberg's Benarx<sup>®</sup> Product range has been approved and used by the oil and gas assets owners, EPC contractors, construction yards and OEM companies in the Oil & Gas industries. The Benarx<sup>®</sup> Product range is used in offshore facilities and onshore downstream facilities. Beerenberg's product-engineering team also supports the leading engineering houses and contractors on NORSOK-training, IPS work, insulation know-how, clash-testing, 3D design, simulation reports, and documentation packages on major projects.**

The Benarx<sup>®</sup> Product series of prefabricated, modular and removable insulation solutions has provided a lower life cycle cost for both offshore and onshore installation operated major Oil & Gas upstream companies. Our engineering support and the innovative product solutions has helped engineering firms and end clients find the insulation solutions for new build projects, and the on-site engineering support combined with decades of know-how has enabled construction yards to avoid clashes and to complete insulation works according to the construction schedule before sail-away.



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