Plastic Pipe Systems for industrial Applications







De Jongh Pipesystems is committed to **quality** and **customer support**

De Jongh Pipesystems has celebrated its 20th anniversary. Director Gerjan Schreuders: 'A lot has happened at our company over the past 20 years, just as a lot has changed in the production and application of piping systems and concrete protection materials. However one thing that has always stayed the same is our dedication to our customers, we use our expertise to produce and execute high-quality products and projects for our clients. We never compromise on quality.'



The company has made spectacular progress: Co de Jongh and Gerjan Schreuders founded De Jongh Pipesystems BV on 1 January 2001 in a small warehouse with an office, primarily focusing on trading activities. Schreuders: 'In 2009, we expanded our activities to include welding. We had one technician, one welding bench for concrete protection plates, and one butt welding machine with a diameter of 90-315 mm in a small workshop. Now we have 20 employees and a modern facility in Heijningen, complete with a well-equipped 1200 m2 workshop, where machines accurately weld highquality prefabricated HDPE for pipe diameters upto 1200 mm and HDPE sheet materials.'

Unfortunately, the saying 'you get what you pay for' also applies to day-to-day operations in piping systems for gas and water distribution, pressurized sewage systems, pumped and gravity pipes, and industrial applications – the field in which De Jongh Pipesystems has established itself as a leading player. Schreuders: 'We've seen it all in the last 20 years: purchasers who opt for dubious quality for a few dimes per metre of pipe; contractors who run into problems because they want to drill under a river bed with sharp gravel with standard pipes; wrongly specified protective tubes for high voltage cables and other pipelines because they get too hot; municipalities and network managers





that have less and less specialist knowledge at their disposal and have to keep up with all the developments of the energy transition. Here at De Jongh Pipesystems, we believe there is only one solution to this, make sure you get expert advice for the planning, engineering, production, and implementation of your project. And that's where we come in. Tell us about your situation. I always say: you might go faster on your own, but you achieve more with colloboration.'



FOCUS ON HDPE

Over the years, the company has acquired a wealth of knowledge about piping systems, materials, and processing. 'We started out trading, but we quickly started processing plastics, focusing in particular on HDPE plastic piping systems. Polyethylene pipes are very strong, have a minimum service life of 100 years, and are unbreakable and flexible. They are extremely suitable for a wide range of applications - not only for gas and water, but also for industrial systems. For example, we have designed plastic piping systems, including complex connections, for various small and large customers. Steel pipes are common in the industry, but steel tends to wear out quickly due to sand and mud, for example. This makes polyethylene a much more attractive alternative.'

NEW MARKETS

De Jongh Pipesystems takes care of the entire process, from planning, engineering, and production to logistics and processing. 'For many years we focused on the gas sector, but due to the energy transition we have started to target new markets. The development of HDPE for high pressures up to 32 bar has made new applications possible: solutions for high risk pipeline systems, heat networks and biogases are growing. The use of HDPE in the landing of cables and pipelines for offshore wind farms shows the markets diversity. The great thing is that we have increasingly become the market's go-to sparring partner, and we continue to amaze the market with our ability to take on extraordinary assignments.'

Schreuders continues: our ability to execute projects as a turnkey supplier gives us a major advantage. The materials used are the same. However we provide improvements in the efficiency and quality of the final installation. We can prefabricate connections in our workshop. We have welding machines that can handle large diameters. We also have eight technicians who can weld on site. The reels with, for example, hundreds of metres of (protective) tubes and pipes also play a key role, so that we, in collaboration with the contractor, can make quick progress.'

TEAMWORK

The director goes on to pay tribute to the entire team at De Jongh Pipesystems. 'We do it together. With professionals and processes with the necessary certifications, with modern equipment and with a corporate culture in which we, from top to bottom and from bottom to top, dare to challenge each other in new developments. We want to learn from each other, because you can't learn about the piping systems industry just by reading books. In our market we're not a standard supplier and we're not the cheapest. But we set ourselves apart through our specialist knowledge, our flexibility (as acknowledged by our customers), the professional way in which proactively help our customers and contractors (who call De Jongh Pipesystems to assist with problems), and the quality of our products and workmanship.'



ENERGY TRANSITION

Speaking of quality, Schreuders concludes by emphasising the high quality of HDPE. 'It is a sustainable product, made from residues from the oil industry, with a service life of at least 100 years. The product is lightweight, which makes it easier to process, and it requires minimal maintenance. The energy transition will be able to benefit from HDPE as well as our knowledge and expertise.'

DE JONGH PIPESYSTEMS B.V. WWW.DEJONGHPIPESYSTEMS.NL



egeplast | Pipe Systems safeguarding future Generations

Regarding plastic pipe systems, De Jongh Pipesystems B.V. only representative of egeplast International GmBH in Greven (D) on the Dutch market. Egeplast is a leading factory of specializing in the production of HDPE pipes up to 1600 mm.

egeplast is a highly motivated manufacturer that has been setting the standards for decades in the production of plastic pipe systems. Customers in more than 30 countries rely fully on the quality products and consulting solutions of egeplast.

State-of-the-art manufacturing made in Germany stands for quality and resource-saving sustainable production.

The range of products offer a solution to meet almost any of our customers' challenges. There is a long tradition of research and development at egeplast. They are technology leaders with more than 60 patents for products and manufacturing processes.









1. Introduction



Historically, industrial pipes used to be made of metal. Later, however, the European gas and water utility industry initiated (and in the meantime completed) a large-scale shift towards utility pipes made of polyethylene (PE) as early as in the 1960's.

Corrosion has been found to cause damages in the amount of 3% and more of the gross national product (Source: WCO World Corrosion Organisation). It is a process which in particular affects metallic pipes, which is why many complicated and costly measures are taken in order to delay or even prevent internal and external corrosion, incrustation and premature failure of metallic pipes:

- Coating (polyethylene, red lead, chromate, phosphate, varnishes, galvanising, enamelling, bituminisation)
- Active and passive corrosion protection
- Regular pipe cleaning and inspection
- Use of chemical additives in the process medium

Corroded steel pipes

Plastic pipe systems are not subject to corrosion and are characterised by high resistance to a large number of chemicals and aggressive media. Plastic pipe systems provide a high degree of operational reliability; they are sturdy and at the same time flexible. Owing to their low wall roughness and high hydraulic capacities, plastic pipes represent a safe and at the same time cost-efficient alternative.

Combining PE pipes with materials such as aluminium or other plastics creates new possibilities application-wise, e.g. as far as diffusion tightness or higher pressures go. Nowadays, the areas of application which plastic pipes are suitable for have become extremely wide-ranging and grow steadily.



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2. Advantages of plastic pipes in industrial infrastructures

Pressure pipe systems made of PE 100-RC are ideally suited to meet the requirements for industrial media pipes. They can be used to carry air, gas, water, sewage and chemicals. They are costefficient in view of their long service life (which allows

High flexibility facilitates handling while

(shorter construction time).

reducing the need for elbows and enables us to deliver lengths of 100 m as coiled bundles

for them to be written off over decades) and ensure a high degree of supply and disposal reliability without incurring any damage. Plastic pipes are also a cost-efficient solution for implementing the renewal of preexisting pipes.



Prefabricated components



Complete delivery programme including fittings and flange transition pieces



Flexible connection technology

egeplast pipes can be connected via standard fixed and lapped flange connections using both electrofusion welding and butt welding. They can also be connected to preexisting steel pipes easily.



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In addition to merely supplying pipe systems, egeplast also provides services such as prefabricated connection systems, e.g. flanges, as well as manufacturing of customized special components. Compared to pipes made of other materials, pressure pipes made of polyethylene (PE) offer certain materialspecific advantages.



More than 100 years of normatively ensured service life



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Reduced pipe roughness Reduced pipe roughness results in reduced loss of pressure and less incrustation

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Seamless connection by means of welding methods reflecting international standards



3. Applications in industrial infrastructures

The potential applications for plastic pipes in industrial contexts are manifold. Since they vary significantly and place different demands on the pipe system depending on any given application, varying pipe systems must be used: abrasion-proof, resistant to chemicals, protection against static charge or meeting the requirement to ensure permanent monitoring of the operating conditions of the system or providing enhanced pressure resistance. The various properties of egeplast pipes for industrial applications can also be combined to achieve customer-specific results which will be optimal for the intended purpose. Egeplast offers pipelines and the associated fittings such as elbows, T-pieces etc. for entire industry pipe systems.



egeplast





Challenge

Plastic pipes are resistant against most chemicals including hydrocarbons. But nevertheless, permeation (of hydrocarbons in particular) may occur. Against this background, a barrier layer might be required e. g. for the purpose of transporting high-purity industrial media, protecting sensitive bacteria cultures in multi-stage sewage treatment plants or carrying industrial sewage which is subject to hydrocarbon pollution. The protective layer also fulfils the requirements with regard to oxygentightness according to the DIN 4726 standard.



Solution

For applications requiring a permeation-tight pipe system, plastic pipes with a barrier layer, such as the egeplast SLA® Barrier Pipe with an aluminium barrier layer, are ideally suited. The permeation barrier layer reliably rules out any permeation of harmful substances through the pipe wall into both directions. The metallic permeation barrier ensures permanent protection of sensitive media and the environment. Thanks to their proven permeation tightness, the egeplast SLA® pipes have been approved for the installation of drinking water pipes in contaminated soil. Beyond that, numerous tests have shown that they ensure the permeation barrier effect required for carrying environmentally sensitive media. Regardless of the plastic-metal composite, these pipes are so flexible that they can be delivered as coiled bundles to be installed by means of trenchless installation. In addition, their electrical properties also offer the option to locate the pipeline and to assess its intactness once it has been installed.





inner pipe made from PE 100-RC

SLA® Barrier Pipe



Product benefits

- Impermeable piping system, approved for installation in contaminated soils and soils susceptible to contamination (KIWA- and TÜV-certified)
- Proof of permeation tightness for the transport of industry water with volatile organic components by TÜV Nord
- The special additional protective layer ensures installation of the pressure pipe without any damages in trenchless pipe-laying.
- Integrity testing of the piping system for acceptance of the construction work







100% security thanks to leakage monitoring

Challenge

Some industrial applications require permanent monitoring for potential leakages for the sake of protecting the environment and in some cases also to comply with statutory requirements. This way, any leakage of chemical media into the environment including possible consequential damage for humans and nature and also any resulting reliability risk can be definitely ruled out. Typical applications of this kind are media pipes in the chemical industry, aromatic hydrocarbons, biogas plants (liquid manure pipes), sewage from galvanic plants, the paper industry, sewage from treatment plants, coating lines, sewage from metal processing, life science, the textile industry, the mining industry.





Solution

An electrically conductive aluminium layer integrated into the plastic pipe allows for 100-percent leakage monitoring to ensure soil and water protection. The pipe system (3L Leak Control) reports and locates damages — even without mains-fed operation — and can be monitored and controlled online from any internet access. A monitoring unit which is connected to the pipe will trigger an alarm even in the event of very minor damage. Reports are either sent directly to the control centre or to the designated smartphone or can be viewed directly online. Connected pump systems can automatically be switched off. Thus disasters are reliably and from early on prevented. Moreover, the integrated aluminium layer serves as a permeation layer and thus prevents any contamination of the environment.



3L Leak Control



made from aluminium

inner pipe made from PE 100-RC

Product benefits

- Permanent Monitoring of the Pipeline, exact detection of leakages
- Remote maintenance for the installed pipe as well as all installed system parts
- Intermittend Monitoring in areas without any electricity supply is possible via a battery-powered monitoring unit
- Trenchless installation possible
- Permeation tight (TÜV Nord tested)
- Safe welding Connections
- Fulfils the requirements of continuous leakage Monitoring according to ATV-DVWK-A 142 for use in potable water protection Zone II with high risk potential





3.3 S Abrasion-resistant pipe systems

Challenge

Various industry sectors involve media containing solid matter ("slurry"). Owing to the abrasive properties of these media, these applications involve special requirements with regard to the pipe systems used in order to ensure a profitable service life in spite of fast wear from abrasion. This kind of pipe systems will be used e.g. in the mining industry, for sewage slurry lines, salt mines, maritime land reclamation (sand-water mix), transporting granulates and pellets and animal feed transport.



Solution

egeSlurry[®] piping system is designed for the hydraulic and pneumatic transport of abrasive transport material. egeSlurry[®] pressure pipes ensure the best possible durability and efficiency for industrial applications through modern multilayered pipe constructions with specially selected inner coatings. In addition, the flexible, ductile and corrosion-resistant pipe materials can be installed cost-effectively.





egeSlurry®

Product benefits

- Increased durability of the transport pipeline through integrated wear and tear protection
- Longer maintenance intervals, reduced costs and prevention of down times
- Installation with established jointing techniques, like welding or use of flange connections
- Fully integrated system with moulded parts, which are also protected against wear and tear
- Prefabricated piping system solution for challenging industrial applications

Greatly reduced wear of the egeSlurry® PE pipes compared to PE 100

(results from ISO 15527 sand/slurry test)





3.4

Pipe systems providing protection against static charge

Challenge

Many industrial applications involve transport of dry gases, powdery solids and flammable media. In potentially explosive atmospheres in particular, any electrostatic charging of pipes, containers and plant components must be prevented by taking appropriate protective measures to ensure the safety of humans and the environment. Among the exemplary applications are pneumatic transport of dusts, animal feed transport, pellet transport (fish farming), explosive media as well as potentially explosive environments.



Solution

Conditions where static charging occurs require pipe systems (egeStatic) ensuring a safe discharge of any static charge, a purpose for which we use co-extruded solid-wall pipes made of PE 100-RC with dimensionally integrated PE-EL layers. Depending on the application, these layers can be arranged inside or outside, with a combination of both being another option.





egeStatic

Product benefits

- Pressure-tight up to 10 bar
- Individual solutions according
- to customer requirement
- Prefabrication possible
- Possibility of customizations
- Low tare weight
- No corrosion tendency

Ω 1018 electrostatic insulating 1016 -(PE 100) 1014 -1012 electrostatic discharging 1010 -10⁶ 104 electrostatic conductive 10² 10 10⁻² 10-4 -10-6 -

electrostatic resistance

static charge increase



3.5 Temperature-resistant pipe systems

Challenge

In processes such as the disinfection of pipes at higher temperatures or the transport of hot process water, common PE pipes reach their limits. In these cases, pipe systems with temperature-resistant PE materials are needed, which enable longer service life.



Solution

For high temperatures such as those occurring in the pipe fumigation process performed prior to conveying sensitive media through the pipes or for internal process pipes and hot sewage, egeplast pipe systems with integrated temperature-resistant layers can be used. The egeTherm® High-T pipe system is suitable for safe transportation of media featuring permanent temperatures of +70 °C and can be expected to provide 50 years of service life.





egeTherm[®] High-T

Product benefits

- Area of application with a higher temperature, also brief warming up to 95°C, e.g. when flushing a line, possible
- Reduction of an additional warming-up by solar radiation by means of a white outer coating possible
- UV-stabilised outer surface possible
- Can be welded according to DVS 2207-1
- High flexibility and ductility



Service life temperature time limits in accordance with DIN 8074 / ISO 24033



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Challenge

In various industrial applications, pressure levels above the common applications of PE pipes are needed. However, the advantages of the PE pipe, such as its high flexibility, resistance to corrosion and incrustation, are the prerequisites for an economical technical solution. For example, the connection of biogas plants to the existing high pressure network structure or the creation of supply lines of several industrial media to the end client.





Solution

For high pressures, we recommend the egeplast product range of self-reinforced high-pressure pipes (HexelOne® SLM), monocomposites consisting exclusively of polyethylene. This reinforcement enables new areas of application in the "raised pressure" area, in other words, operating pressures above applications previously covered using PE pipes. The reason: It indicates twice as high a strength compared to the previous PE pipes. Optionally, pipe system for different kinds of requirements can also be equipped with additional reinforcement layers.





HexelOne[®] SLM



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Press-fit connectors for the transition from one material to another; for shrink wrapping of steel pipes

Product benefits

- Permissible operating pressures of 30 bar for aqueous and 20 bar for gaseous media
- DVGW and TÜV Süd certified
- Can also be installed trenchless due to protective layer and inner layer of PE 100-RC
- Less connections due to delivery lenghts up to 145 m
- Welded joints according to standard methods
- 100% recyclable



Layer 4: Option: additional protective layer made from PEplus

Layer 3: outer layer made from PE 100

Layer 2: intermediate layer made of high-strength PE

Layer 1: PE 100-RC in the inner layer



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4. Customised pipe systems with matching fittings and components

Challenge

The applications in industry are diverse and make different demands on a piping system depending on the field of activity. Abrasion-resistance, chemical resistance, protection from static charge, the desire for permanent monitoring of the systems or increased pressure resistance.

Individual pipe solutions

The characteristics of egeplast pipes for the industry can be individually combined for the respective intended purpose.





Media Pipe

The media pipe is adjusted to the application. It can be provided with abrasion-resistant inner layers, on request made of special, temperature-resistant PE for the transmission of hot media until max. 95°C or for protection of static charge.

2 Strengthening layer

e.g. increased pressure resistance by means of a middle layer of stretched PE 100 or fibres.

Exemplary layers

3 Co-extruded intermediate layer/outer layer

e.g. can also be used as indicator layer; on request possible as abrasion-resistant outer layer or also as white outer layer to reduce warming-up by means of solar radiation.

4 Metallic layer

e.g. permeation-tight aluminium barrier layer for protection against chemicals or for performance of an integrity test and/or permanent monitoring of the pipeline.

6 Abrasion-resistant protective layer for protection of outer damage

Individual assemblies and moulded parts solutions

egeplast offers segmented moulded parts, manufactured from piping, also designed according to the pressure class and requirements. All moulded parts can be delivered in the desired function (SLA[®], DCT, 3L, egeSlurry[®] or similar).

Entire assemblies, consisting of pipe and/or moulded parts, can be designed and prefabricated according to customer specifications, in order to facilitate your work at the jobsite.





Product benefits

- Individually manufactured moulded parts and assemblies, design according to customer measurement
- Welding performed at the factory
- Interchanging of design drawings for approval
 Time-saving at the jobsite due to prefabrication

Customized Product Designs













5. Other fields of application

In addition to the applications related to utilities and disposal they were originally intended for, other fields of application, too, can benefit from the advantages provided by PE pipes.

Irrigation of fields

For more than 30 years, egeplast has been a partner of irrigation system manufacturers both in Germany and abroad. State-of-the-art production technology enable us to respond flexibly to the specific requirements of any individual customer. For optimum hydraulic conditions, features such as varying wall thicknesses across the entire length of a particular pipe segment can be realized according to the DIN EN 12324-2 standard.



Irrigation

Thanks to their flexible delivery lengths and dimensions and easy installation, PE pipes are very well suited for both private and commercial irrigation systems.

Semi-finished products - cylindrical body

Further processing as semi-finished products for special components made of PE or complementation of products and machines using egeplast pipes is also possible.

Special production technologies enable egeplast to manufacture items such as pipe segments as a base body e.g. for brushes. Not only do these base bodies involve the advantage of being light-weight: PE components also provide the benefit of high resistance against chemicals.

Since it is possible to manufacture PE pipes with many stiffnesses and dimensions, they can also be used for example as a winding core for a large number of applications.

Technical drawing of an exemplary cylindrical base body

Mechanical protection / corrosion protection

Thanks to flexible production options, pipes can be realized based on individual customer specifications and be made to fulfil the requirements associated with applications such as corrosion protection of component parts mounted in the ground or protection of tubes during transportation.



6. Renovation of industrial pipes

Challenge

Industrial pipelines are frequently exposed to extremely rough conditions which tend to reduce their useful life, meaning that they will need to undergo rehabilitation or be replaced fairly frequently. Especially if steel pipes are used, the need for rehabilitation owing to corrosion and incrustation is particularly important. In view of the relatively short renewal cycles of the pipe system, rehabilitation/replacement must be handled in a particularly economic way in order to be costefficient in the long run.



Solution #1 Renewal of pressureless pipes from shaft to shaft

Short pipe modules (egeModul PE) made of high-density polyethylene (PE-HD) provide a cost-efficient option for rehabilitating or renewing damaged gravity pipelines from shaft-to-shaft. The high ductility of the PE-HD material used here allows for sustainable operation of the canal without any formation of cracks or fractures.

Product benefits

- Cost-effective rehabilitation from shaft to shaft possible
- Verified tightness according to DIN EN 1277 with increased test requirements of maximum 2.5 bar and angulation of maximum 3° in the area of the sleeve
- Click technology prevents shifting in the area of the sleeve during pulling Operation



multiple safety thanks to 3-lip seal and push-click joining

PE-HD solid wall pipe following DIN 8074/75

egeModul PE



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Solution **#2** Rehabilitation of pressure pipes if space is limited

Especially if space at the construction site is limited, pipe systems subjected to thermodynamically moulding or folded during the manufacturing process (egeLiners) represent a cost-effective alternative. Based on their reduced cross section, long lengths, even those with large dimensions, can be wound onto drums. To promote elastic resilience, the pipe is heated up using hot steam following its insertion. Thanks to the memory effect which gets activated this way, the PE pipe is made to regain its original round shape. The new pipe will then fit closely with the old pipe as a structurally independent pipe.

Product benefits

- Minimum space requirement for the job site
- Certified by DVGW
- Little interference in road traffic (traffic can flow almost unobstructed)
- Lower excavation costs due to pulling the pipe in via excavation pits or existing shafts
- Statically sustainable piping system
- Obtains hydraulic capacity by means of very little loss of cross-section and reduction of the wall surface roughness







Solution **#3** Flexible and safe renewal of pressure pipelines

In the event of cost-efficient installation by means of trenchless installation, protective-layer pipes (SLM® 3.0) provide the network operator with a long service life and economic viability to the network operator. Using this kind of pipe enables both the engineering offices involved and the principal to prove error-free planning for the pipe.

Product benefits

- The additive protective coating (wearing surface) enables damage-free installation of the new pressure pipe.
- Welding according to DVS standards: butt welding without cut-back is possible, Tapping on undamaged pressure pipe
- Trenchless installation techniques are possible without shortening the durability due to damages or reduction of the safety factor.
- One piping system for all installation techniques (open trench and trenchless installation)









Solution #4 Documented quality level following pipe renewal

Whenever safety around the rehabilitation/renewal of a pipeline is of particular importance, pipe systems with a protective layer made of PE 100-RC can be equipped with integrated conductive strips (SLM® DCT). These strips make it possible to assess the intactness of the pipe system immediately after its installation. Moreover, they enable permanent detection of the installed pipeline.

Product benefits

- Integrity test of the piping systems for acceptance of the construction work
- Increased safety during operation
- Permanent detection
- Trenchless installation techniques are possible without shortening the lifetime through damage or reduction of the safety factor.

additional protective layer made from PEplus

conductive strips for pipe detection and integrity check

inner pipe made from PE 100-RC

SLM[®] DCT









7. References

SLA[®] Barrier Pipe

OD 560 SDR 11 PP-R

New installation of a transport pipeline for high corrosive deionised water through an industrial area with year long chemical and refinery operations. Protection of the process water against contaminated soil.

SLA® Barrier Pipe OD 140 SDR 11

Removal of hydrocarbon-contaminated harbor sewage water to the cleaning plant 15 km away. Protecting the environment from contamination.









3L Leak Control OD 160 and OD 225 SDR 11

Separate monitoring of the substrate lines of fermenter, post fermenter and storage container with forwarding of monitoring values to a control center. Regulatory compliance requirements and increased operational safety. **3L Leak Control** OD 160 SDR 11

Monitored 4-way process water line in a chemical park / Protection of the environment with increased process reliability and increased reaction time in case of emergency (early warning system)



SLM® 3.0 OD 280 SDR 7,4

Rehabilitation of a corroded steel pipe for food production DN 300 by installing a protective layer pipe. Fast construction progress and therefore no interruption of the production process of a food producer by simple and safe relining of a protective layer pipe. egeTherm High-T OD 125 and OD 140 SDR 11

Transport of hot mineral water for spa centers in Bulgaria. Economical installation of a new mineral water pipe due to the benefits of long lengths and safe connections of PE pipes in combination with increased temperature resistance.







egeSlurry OD 280 SDR 11

Transport of a sand-water slurry in a sand dredging. Easy and flexible installation at increased service life and extended inspection intervals thanks to a special abrasion protection layer on the inside of the pipe.



egeStatic OD 90 SDR 11

Transport of dry fish feed pellets for fish cages in Norway. Electric charges are diverted by a special pipe structure. Unwanted electrical discharges are avoided.



Service

Please allow our sales staff to explain to you exactly what the benefits of egeplast products are – and how these solutions can assist your business achieve more investment security.

Consulting in Project Planning



Provision of Tender Documents



Support during Construction Work on Site



Rental of Welding Machinery and Clamping Jaws, Accessories





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De Jongh Pipesystems



Knowing more?

Our wide range of high-quality and user-friendly products offers a suitable solution for all practical problems.

Call us and an experienced, motivated and well-trained team is ready to provide you with expert advice.

- **\$** +31 (0)167 521 739
- info@dejonghpipesystems.nl
- www.dejonghpipesystems.nl

Industrieterrein Dintelmond 1e Februariweg 9 4794 SM Heijningen



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