Intelligent Plastic Solutions
Reduce abrasion – increase uptime
Custom solutions for challenging tasks

The ROSEN Group is an international company specializing in asset inspection, asset integrity management and intelligent plastic solutions. In the course of the past three decades, the company has developed solid expertise in the areas of inspection, engineering, consulting, comprehensive integrity management, and polyurethane elastomers for wear protection.

With state-of-the-art equipment, the ROSEN Group is the perfect partner for projects where plastics are linked with systems like sensors, loggers or software. The company develops and manufactures high performance elastomers, internal and external coatings, and smart plastic systems for a wide range of applications and industries such as oil and gas, mining, tunneling or wind energy. Typical applications range from interior coatings for abrasion and corrosion protection of slurry pipelines to intelligent wear protection and wear-monitoring devices for numerous industries.
The Challenge
Operators must minimize abrasion and corrosion in their assets while keeping operational costs and risk of failure to a minimum. Maintenance and shutdown costs are major contributors to the overall expense of slurry pipeline operation. Maximizing intervals between shutdowns significantly increases plant availability and profitability.
Life extending solutions

Thanks to their extensive engineering know-how and advanced research and development ROSEN is able to combine mechanical and electronic components with plastics. Through careful control of all manufacturing parameters and application-oriented specialists, ROSEN delivers in-house developed RoPlasthan® polyurethane formulations that fulfill operators’ individual demands.

In order to guarantee the highest quality and proximity to customers, ROSEN operates its own production facilities in Lingen (Germany) and Calgary (Canada). Both are equipped with extensive manufacturing machinery, own mold design and production, quality control, as well as further engineering services along the value chain.
The Solution
Numerous approaches to meet your requirements

**High-performance Elastomers:** improved components for better plant performance
High-performance Elastomers made from RoPlasthan® are available in different hardness grades with better wear, chemical or thermal resistance than other wear protection materials. Applications range from pipe bevel protection through specially designed pipe caps for use during pipeline construction, wear protection for truck beds, slurry pump wear liners, and many other plant components.

**Coatings:** protect your pipe to extend its lifetime
With RoCoat™, ROSEN has developed a special RoPlasthan®-based coating for pipelines that is applied to steel pipes. This material is exceptionally abrasion resistant and thus highly suitable for pipeline transportation of very abrasive materials. RoCoat™ adheres to steel much more strongly than other polyurethanes, thus allowing direct coating of the steel pipe without delamination, even under cold-wall conditions. Pipes, bends or other fittings coated with RoCoat™ are more reliably protected against abrasive and corrosive wear. Hence, service life of coated fittings is increased many times over compared to that of uncoated ones.

**Smart Plastic Systems:** adding extra value to assets
In addition, ROSEN adds extra value to operations through Smart Plastic Systems, which combine RoPlasthan® with sensors or other communication devices. These systems link the outstanding material properties of polyurethane with intelligent monitoring electronics, and are suitable for a wide range of industrial applications requiring reliable, robust abrasion and tear resistance.
The Benefit
Tailored to your individual needs

The properties of ROSEN polyurethane elastomers far exceed what is otherwise available on the market. ROSEN formulates and synthesizes materials in-house and develops their own customized technical solutions. These special formulations guarantee unique material properties that meet all of a particular customer’s requirements. Customizable mechanical properties, coupled with complete control of all manufacturing parameters, ensure optimal product features for enhanced lifetime, safety and reliability.

The advantage:
- Reduction of operational cost through targeted approach
- Minimized downtimes through customized formulations
- Extension of asset lifetime
- Reliable material properties even when exposed to high pressure
- Increased asset availability
- Safer working atmosphere
- Safeguarding the environment

RoPlasthan® key features:
- High wear resistance, elongation and resilience
- Mechanical strength
- Wide chemical compatibility
- Exceptional abrasion resistance and hydrolytic stability
- Low compression set
- Excellent adhesion to metal
- Antistatic
- Weathering and temperature resistance
- Excellent tear and tear propagation resistance
The ROSEN Group

The ROSEN Group is a leading privately owned company established in 1981 by Hermann Rosen in Lingen, Lower Saxony, Germany. Over the last thirty-five years, ROSEN has grown rapidly and is today a worldwide provider of leading technology in all areas of the integrity process chain with more than 2,800 employees in over 120 countries worldwide.

The key to ROSEN’s highly innovation-driven approach is listening carefully to the customers’ specific needs and challenges. “Empowered by technology” is the promise that ROSEN systematically delivers on by enhancing our customers’ operations and in the process making them safe, reliable and more efficient.

The ROSEN Group is a worldwide provider of cutting-edge solutions in all areas of the integrity process chain suiting a wide range of industries: oil and gas, energy, process, mining, manufacturing, telecommunications and transportation for a wide range of assets, including pipelines, tanks and vessels, as well as wind turbines, trains, telecommunication towers and many more.

ROSEN’s products and services:
- Inspection of critical industrial assets to ensure reliable operations of the highest standards and effectiveness
- Customized engineering consultancy providing efficient asset integrity management
- Production and supply of innovative, customized systems and products
- Market-driven, state-of-the-art topical research and development providing value added products and services