

**OIL & GAS**

**NEW**

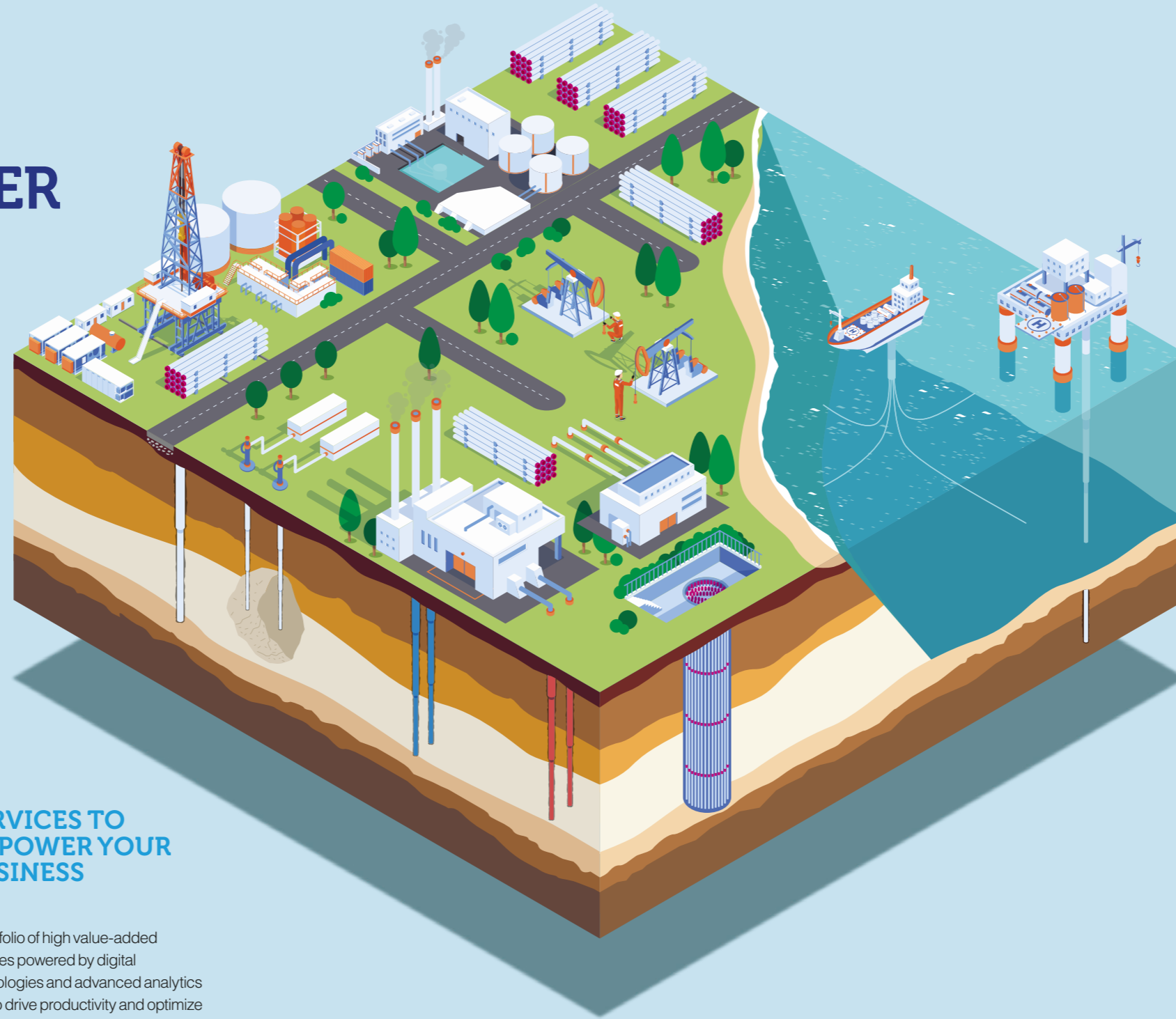
A PIONEERING  
TUBULAR  
PARTNER  
FOR ALL  
YOUR ENERGY  
PROJECTS

**ENERGIES**

**CUTTING-EDGE**

**SOLUTIONS**

# A SOLUTION- MAKER PARTNER YOU CAN RELY ON



## A COMPREHENSIVE PORTFOLIO

Our extensive portfolio of innovative, premium tubular products covers every need for Oil & Gas and new energies, including hydrogen, geothermal, and carbon capture and storage.

From design and engineering through to delivery and installation, whatever the scope, whatever the challenges, we deliver the most reliable and cost-effective solutions, making them the go-to product for complex applications in some of the most extreme conditions.

## SERVICES TO EMPOWER YOUR BUSINESS

A portfolio of high value-added services powered by digital technologies and advanced analytics help to drive productivity and optimize your business.

Focusing on optimization and integrity, we use the latest digital technologies to gather and analyze data from our pipes and physical services alongside information provided by our partners. Our digital solutions allow you to accelerate your strategic decision-making process, improve integrity and asset management, while reducing operating costs.

Whatever your market, whatever the challenge, our smart tubular solutions will help drive your business. Vallourec works alongside you to develop new tailor-made solutions that meet your needs.

## WE CARE ABOUT WHAT COUNTS FOR YOU

We put our commitment to quality, health and ethics at the heart of everything we do. Whether it's during manufacturing or on site, the safety and health of those working with our products is our absolute priority. This commitment to uncompromising standards is a key enabler of industrial excellence, helping us to consistently deliver exceptional quality and safe performance. Ultimately, this allows us to achieve our final goal: a fully satisfied customer.

Our track record of constantly improving the sustainability of our consumption and production is regularly confirmed by the ratings agencies and certification boards that provide independent recognition of our commitment in this area.

# OIL & GAS: PROVEN EXPERTISE ACROSS THE VALUE CHAIN

Ever since it pioneered the first VAM® connection in 1965, Vallourec has been a leader in tubular solutions for the Oil & Gas sector. Today, we cover your needs at every stage of your project.

## PRODUCTION

For the exploration and production of your Oil & Gas wells, you can rely on Vallourec's field-proven portfolio, with materials and connections adapted for every scenario: onshore and offshore, conventional, deepwater, high pressure, high temperature, corrosive environments, etc.

Our full range of steel grades, both API and proprietary, include high yield grades up to 150 ksi, high collapse grades and heavy wall pipes, sour service grades and Corrosion Resistant Alloys.

Our VAM® connections are gas-tight, ensuring wells always maintain their integrity. VAM®21 has been tested to the most stringent performance requirements (API RP5C5:2017CALIV) and has the highest proven technical performance of any connection on the market.

Furthermore, the VAM® range is available threaded & coupled, flush or semi-flush to fit any well profile.

Our wide range of Tubing & Casing accessories is supplemented by Surface Equipment and Completion accessories, including innovations to boost safety and efficiency such as our Pre-Installed Cable Protector (see page 9).

CLEANWELL® is our non-polluting, multi-function coating applied on the surface of VAM® connections, delivering exceptional anti-corrosion and lubrication properties. It accelerates running time by up to 30% while improving safety and sustainability, and generating cost savings throughout the pipe life cycle.

## TRANSPORT

Vallourec has decades of experience in Oil & Gas pipeline transportation. Our offer of products and services meets the challenges of both onshore and offshore line pipe projects.

Our seamless line pipe offer provides a wide range of dimensions and grades for any offshore or onshore pipeline application.

Special features include a homogeneous fine-grained steel micro structure for superior mechanical properties, enhanced weldability on heavy-wall pipes, and tight pipe-end tolerances (ID & OD).

Solutions for fatigue sensitive applications are available for the harshest environments: ultra-deep offshore, high-pressure applications, and severe sour environments.

External coatings cover everything from anti-corrosion to thermal insulation.

Customized options include accessories (such as components manufactured by additive manufacturing, bends, pup-pieces, transition joints, buckle arrestors or shaped pipes in general), and welding operations.

Our digital solutions boost the efficiency of field operations for EPC customers.

Our X80 grade for mild and intermediate sour environments delivers wall thickness up to 20% lower than standard X65 grades at similar design pressures, helping you reduce weight and decrease project costs.

## HYDROCARBON PROCESSING

Vallourec supplies both EPCs (Engineering, Procurement & Construction companies) and international distributors with seamless pipes featuring excellent weldability for new builds, maintenance, repair and overhaul projects. From custom orders to exclusive framework agreements, we can help you deliver solutions for floating units, CPFs, gas processing, refineries, and petrochemical plants.

We offer the largest dimensional range of seamless pipe (OD and wall thickness) for a full range of carbon and alloy steel grades.

Our portfolio includes high temperature and low temperature grades, CRA, and excellent creep resistance and toughness properties.

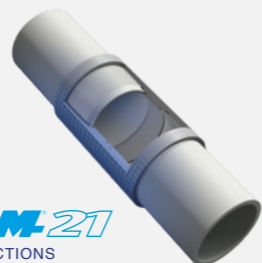
Standard fine grain steel production features low sulphur and low phosphorus content.

We have the flexibility to offer both large numbers of items and small quantities.

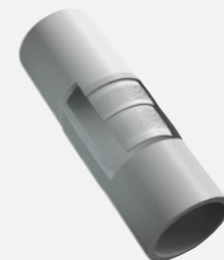
We supply hollows (motherpipe) for bends and fittings.

## OUR FLAGSHIP PRODUCTS

VAM-21  
CONNECTIONS



### VAM® 21 CLEANWELL®



### VAM® SLIJ-3



### X80 LINE PIPE



# VALLOUREC® NEW ENERGIES: ACCELERATING THE ENERGY TRANSITION

## HYDROGEN

Vallourec's solutions are well-adapted to withstand the complex environments of hydrogen. As well as enabling safe pipeline transportation of hydrogen, we are an active player in the development of hydrogen storage through our innovative Delphy vertical storage technology and tubular solutions adapted to salt cavern wells.

Our teams have already equipped several pilot wells for hydrogen storage in Europe and North America.

- Our steel grades have been successfully tested for hydrogen applications as per **ASME B31.12**.
- Our seamless pipes feature resistance to high pressure, corrosion and hydrogen embrittlement, with proven success for **fatigue-sensitive applications**.
- VAM® connections have been tested and qualified for **tight sealability** for safe hydrogen storage.

### DELPHY: AN UNPRECEDENTED STORAGE SYSTEM

- Delphy is our solution for storing between **1 to 100 tons of compressed gaseous hydrogen** in underground tube strings with optimized safety.
- Thanks to a minimal surface footprint and a modular design, storage occupies up to **30 times less acreage** than above-ground alternatives.
- The solution uses qualified technologies for **safe and long-lasting storage**.
- Available at high pressures **up to 500 bar / 7,300 psi**.

## CARBON CAPTURE, UTILIZATION & STORAGE (CCUS)

Vallourec's seamless tubular products provide the foundations for building a robust transport and storage CO<sub>2</sub> infrastructure, ensuring safety and sustainability as part of the worldwide effort to combat climate change.

- Our line pipes and OCTG pipes **withstand the harshest conditions**, from corrosive environments to freezing temperatures, ensuring reliable CO<sub>2</sub> transport and storage.
- VAM® connections ensure **gas sealability**, even at -80°C during a blow-out scenario.
- Our products deliver reliability and performance, tested in over **500 thermal cycles** and proven to withstand a 60°C temperature gradient between pin and box.
- Our team's expert guidance enables you to select grades, mechanical characteristics and weldability tailored to your requirements.

## GEO THERMAL

Thanks to its competitive cost and small land footprint per MW, geothermal is a growing sector – but operators require special technical expertise to meet the unique challenges of each location. For over 30 years, Vallourec has been successfully developing solutions specifically for geothermal, customizing tubular products with key features.

- Resistance to extreme temperatures and high compression** thanks to proprietary higher-yield and controlled yield strength materials combined with VAM® 21 connections (TWCCP-certified up to 350°C / 662°F).
- Corrosion resistance** with grades ranging from carbon steel sour service to chrome and corrosion resistant alloys (CRA).
- High collapse and sour service grades** with cost-effective casing for well integrity in unstable geothermal environments.
- THERMOCASE® VIT** (Vacuum Insulated Tubing) is a cost-effective solution for closed-loop geothermal systems, proven in the field since 1999. Thanks to outstanding insulation properties, it enables hot and cold fluids to co-exist in close proximity, increasing the well's overall power output.

## SOLAR & BIOENERGY IN BRAZIL

Vallourec's sites in Brazil produce tubular solutions for the solar and bioenergy sectors.

In **solar**, we provide torque tubes and cold-formed open profiles essential for building large-span structures that support photovoltaic panels.

In **bioenergy**, we supply carbon and alloy steel tubes for a range of applications in the ethanol and corn mill sectors, including boilers, pre-air heaters, and heat exchangers. Our exclusive VBRM04 grade, designed for boiler pre-air heaters, lasts up to four times longer than welded stainless tubes, depending on plant conditions.

**delphy**  
by vallourec

With decarbonization becoming increasingly urgent, Vallourec® New Energies offers solutions for clean energy. Using our expertise in harsh environments, we have tested and qualified many of our products for new applications, while pioneering new solutions in areas such as geothermal and hydrogen storage.

# VALLOUREC® SERVICES: EMPOWERING YOUR PERFORMANCE

With Vallourec® Services, you'll get more from your tubular solutions – from start to finish. Our expert guidance and specialist tools cover the entire value chain, from advice on selecting materials to project engineering and digital services for operational efficiency.

## PROJECT ENGINEERING

- **Material Selection** is crucial to ensure the integrity of your projects. We help you make the right choices by combining our in-field experience and vast database of test results with FEA modelling, corrosion expertise and in-depth testing.
- Our dedicated team supports you to verify, optimize and standardize your **Well Design**. Using industry-reference software simulations and best practices, we make your well lighter and safer, analyzing and evaluating load cases, safety factors and design scenarios.
- **Wire Arc Additive Manufacturing** is our on-demand 3D-printing service for large metallic parts, allowing you to order small quantities, unusual sizes and complex shapes without additional costs.

## CIRCULAR ECONOMY

- Our comprehensive **Tubular Stock Assessment** service offers on-site inspection and evaluation of your inactive and workover casing, tubing, and risers. Powered by our portable Ultrasound and Eddy Current technologies, it helps you revive unused stock, maximizing the value of your existing assets for reuse or resale.
- **VAM® Rethread** enables you to cut off the connections on old pipes that are still in good condition and thread new VAM® connections.
- With **Protector Recycling**, we inspect and sort your used protectors for reuse, reconditioning, or recycling in the manufacture of new protectors.
- **VAM® Repair** is a chance to recondition rig-returned pipes and reintegrate them into the supply chain of your tubulars quickly, efficiently and safely – with the same level of quality as new pipes.

## OPERATIONAL EFFICIENCY

- Our **Tubular Management Services** (TMS) help you reduce operational expenditures and get full visibility on your stock and yard management. This includes a wide range of services such as storage, yard management, rig preparation, inspection, delivery, and rig returns. By combining customized field and digital solutions, we streamline the most complex installations, offering you reliability and traceability from yard to rig.
- Our **Prime Mapping** service uses a laser- or ultrasonic-automated In-Pipe Rover to deliver precise casing and tubing geometry dimensions, providing string actual bore volume, best packer fit pipe selection and thickest pipes for casing wear mitigation.
- With **VAM® Field Service**, expert technicians ensure the right products are run to protect your well's integrity. Our team looks at everything from product condition to make-up parameters, enabling you to decide when a connection should be backed out, accepted or laid down – and helping you boost safety and performance.
- Vallourec has developed the world's first series of **Pre-Installed Cable Protectors**. PICP are installed offline in the pipe yard and, in as little as 20 seconds, a single operator can then insert and lock the cables in place on the rig floor – saving time and greatly improving staff safety. The solution is adaptable to multiple cable set-ups, accommodating single, dual or flat pack configurations.

## DIGITAL TOOLS

- **TallyVision** ensures pipes and accessories are run according to the planned sequence, and proposes the best updated sequence if necessary. It reduces non-productive rig time, eliminates human error, and offers valuable operational KPIs.
- **Best Fit** leverages powerful digital technology to provide full visibility on achievable Hi-Lo on 100% of Vallourec line pipes. This allows enhanced welding through controlled operations while mitigating costs and risks in the field.
- **Pipe Navigator** is a centralized web portal for instant access to up-to-date contractual documentation and actual pipe data covering every aspect of your pipeline project. Using the website, you can share information, customize data-driven insights, and feed your digital twin.
- **Digital Inventory Manager** streamlines stock tracking by providing real-time visibility on inventory levels and locations. Using data-driven insights, you can optimize stock management, improve order accuracy, minimize errors, and enhance operational efficiency.

# RAISING THE BAR FOR SUSTAINABILITY

The energy sector operates with long-term ambitions and objectives – and we place sustainability at the core of our business. Our innovative global solutions are tailored to the energy challenges of the 21<sup>st</sup> century, and we are fully committed to our own decarbonization journey.

## CERTIFICATION AND RECOGNITION



ecovadis



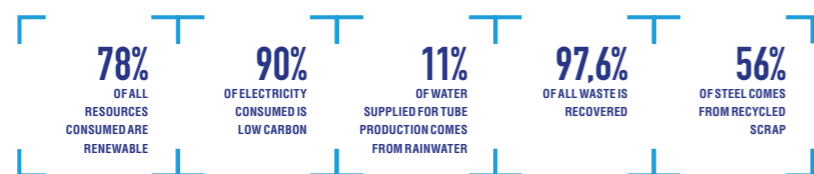
We prioritize ESG - Environmental, Social, and Governance - within our core values. Our long-term commitment to sustainability has delivered proven results.

In 2023, we achieved the **Platinum level on the EcoVadis** assessment platform, which rates companies out of 100 for their performance in sustainability. Overall, we scored 78/100, positioning us in the top 1% of companies in our sector.

Our actions for the environment are the key to this achievement, with 100% of our production sites certified **ISO 14 001**.

We are the only seamless tubular manufacturer to complete the **3 CDP questionnaires**, achieving "A- Leadership" for Climate change mitigation, "B- Management" for Water, and the "C- Awareness" level for Forests.

We have also been awarded the **A rating for ESG** risk and opportunity management by MSCI.



## ENGAGED IN THE GLOBAL CHALLENGE FOR A BETTER WORLD

As a solution provider to the energy sector, we know we are not just working for the present; we are helping to shape the future.

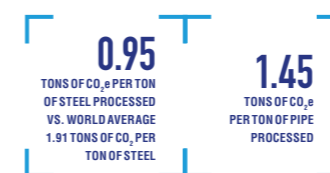
We actively work to reduce our environmental footprint while strengthening our offer and supporting you in your initiatives.

Since 2010, we have been committed to Global Compact, and actively contribute to reaching the UN's 2030 Sustainable Development Goals.

## MAKING CHANGE HAPPEN

In 2020, we announced our ambition to **reduce our CO<sub>2</sub>-equivalent absolute emissions by 25%** between 2017 and 2025. This CO<sub>2</sub> reduction trajectory was approved by the Science-Based Target initiative (SBTi) at a level "well below 2°C" and in 2022, we achieved those targets ahead of time.

In 2022, we launched the Climate Challenge, committing to a **35% reduction in our CO<sub>2</sub> footprint** by 2035 compared to 2021. To achieve this goal, we are focusing on using recycled scrap, biomass charcoal, and low-carbon energy mix (90% in 2023) in our production sites.



## EMPOWERING YOU TO BE MORE SUSTAINABLE

In addition to reducing our own carbon footprint, we provide solutions that enable you to do the same. Our teams are constantly developing digital solutions, smart tubes and new materials to make your operations more sustainable.

- Leak prevention:** thanks to the proven sealability of our tubular solutions, we help you avoid leaks of methane and other substances to the environment. Our VAM® connections are designed to be gas-tight, providing you with the possibility to shift to gas, as per the Oil & Gas Climate Initiative.
- Non-toxic alternatives:** our CLEANWELL® coating replaces the toxic compound traditionally used for storage and threading onsite, while also enhancing overall performance.
- Scrap reduction:** with our Wire Arc Additive Manufacturing solution, you only use the exact quantity of raw material needed to shape your pipe: there is no waste.
- Digital recycling tools:** reuse or recycle your inactive assets thanks to our specialist services.



# WE CARE ABOUT WHAT COUNTS FOR YOU

Vallourec is committed to the long term, both in terms of its customers' success and its own development. That's why our vision has a strong focus on quality, health, R&D and ethics.

## SAFETY FIRST

Safety is our top priority, and we're committed to the highest standards across all operations — including those on customer sites — as we strive to set the benchmark in the Oil & Gas industry.

Vallourec has been progressively deploying its health and safety management tool alongside continuous improvement programs for several years, with leadership actively driving the **CAP 2030 Health and Safety Roadmap** toward ambitious targets.

We are especially focused on mitigating major risks that could result in fatal or life-changing events through the implementation of **12 life-saving rules**, along with continuous risk reduction measures.

Fostering a strong health and safety culture is at the heart of our mission, encouraging everyone to care for one another because we firmly believe **that together, we are safer.**



## QUALITY MATTERS

Like many companies, we use KPIs to ensure best-in-class quality for our products – but we always look to customer satisfaction as our ultimate reference point for quality. At every stage of quality control, from inquiries and orders to product delivery, we've shaped our processes to put your needs and experience first.

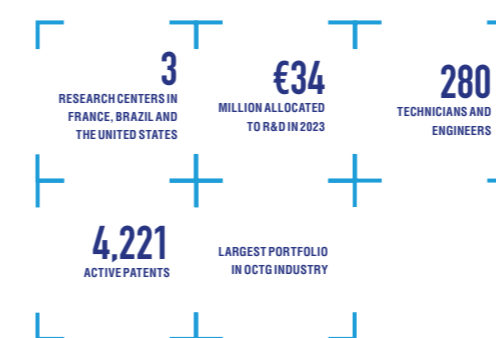
Our ISO-certified production facilities have the capacity to deliver quality that is not only first-rate but also consistent, and we make a point of using innovative digital tools to support our services. This means that, every time you do business with us, you can rely on the same high standards and absolute precision in terms of dimensions, shapes and grades.



## RESEARCH AND DEVELOPMENT

Through research and development, Vallourec seeks to push the technological limits of the energy sector while maintaining absolute safety. Our R&D department supports you to work faster and more efficiently, and helps us to expand our core business. Our latest innovations driven by R&D include:

- fit-for-purpose connection technologies such as the VAM® SLIJ-3 connection in the Gulf of Mexico and the VAM® SPRINT series of connections for US shale;
- custom steel grades such as the X80 grade for offshore line pipes, an industry-first technology that maximizes strength while maintaining weldability for offshore pipeline applications;
- Delphy, a solution for storage of compressed hydrogen in underground tube strings.



## ETHICS AND COMPLIANCE

At Vallourec, we make sure our daily activities always reflect our values of integrity, transparency, professionalism, respect for people, collective commitment, performance and responsiveness. Since introducing our **Code of Ethics** in 2009, we have implemented the Vallourec **Anti-Corruption Code of Conduct** establishing clear rules to combat corruption, to be upheld by every employee.

In addition, Vallourec has developed a state-of-the-art **Compliance Program** focused on preventing corruption, ensuring adherence to international economic sanctions, and promoting fair competition. This program includes robust procedures, thorough third-party due diligence processes, internal and financial controls, comprehensive training plans, and the **Vallourec Integrity Line**, an alert system for reporting concerns.

- 2018: joined the United Nations Global Compact.
- 2018: first edition of the Vallourec Anti-corruption Code of Conduct.
- 2019: Vallourec Anti-corruption Compliance Program obtains the "Ethics Intelligence" Certification.

# PROVEN SUCCESS IN MULTIPLE MARKETS WORLDWIDE



AREA	France
MARKET	New Energies – Hydrogen
CLIENT	Storengy
CLIENT'S CHALLENGE	Deliver the first EU-backed renewable hydrogen storage project, in an underground salt cavern.
OUR SOLUTION	A tailor-made solution composed of tubes, services and VAM®21 connections, tested and validated for hydrogen storage.



AREA	Gulf of Mexico
MARKET	Line Pipe
CLIENT	LLOG
CLIENT'S CHALLENGE	Redevelop a decommissioned deepwater production facility in line with the United States Trade Expansion Act.
OUR SOLUTION	Over 50,000 metres of X70 heavy-wall pipe were delivered, with lead times met despite the challenging logistics.



AREA	Brazil
MARKET	Oil & Gas / Vallourec® Services
CLIENT	Equinor and OneSubsea®
CLIENT'S CHALLENGE	Develop a complex drilling project with 19 subsea wells in a corrosive offshore environment, against a tight deadline.
OUR SOLUTION	Identification of the right material and onsite services such as TMS and VAM® Field Service enabled delivery 4 months early.



AREA	Norway
MARKET	New Energies – CCUS
CLIENT	Wintershall Dea
CLIENT'S CHALLENGE	Develop two sites for carbon capture & storage 100 kilometres off the coast of Norway.
OUR SOLUTION	VAM® 21 casing and tubing with dope-free solution CLEANWELL® provided resistance and sealability for the extreme temperatures and corrosive conditions.



AREA	Germany
MARKET	New Energies – Geothermal
CLIENT	Eavor™
CLIENT'S CHALLENGE	Develop an innovative closed geothermal system at commercial scale with 4 loops drilled at 4,500 m depth.
OUR SOLUTION	A thick-walled, high-collapse tubular solution with VAM® premium connections and just-in-time delivery.



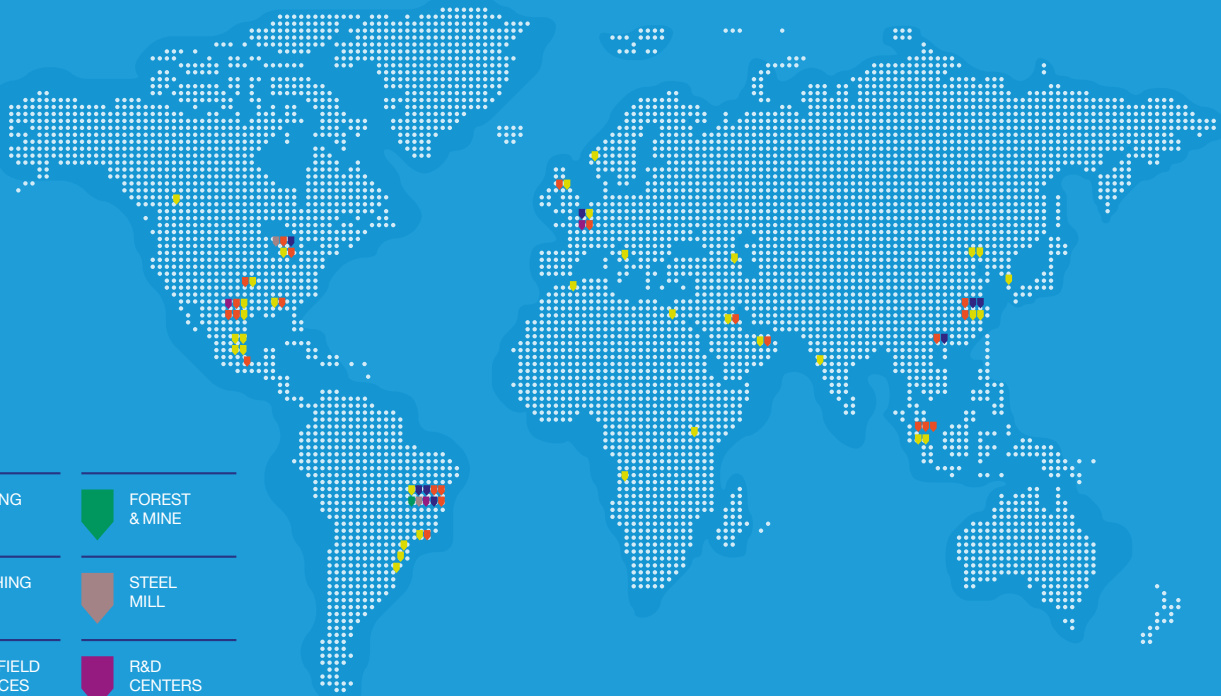
AREA	UAE
MARKET	Oil & Gas / Vallourec® Services
CLIENT	Abu Dhabi National Oil Company
CLIENT'S CHALLENGE	Ensure reliable pipes and connections, and take advantage of new innovations.
OUR SOLUTION	Supply of tubulars for all applications, plus services including local pipe coating and digital running solution Tallyvision.



AREA	Australia
MARKET	Vallourec® Services
CLIENT	Weatherford
CLIENT'S CHALLENGE	Urgently procure lifting plugs capable of carrying 100 metric ton loads.
OUR SOLUTION	Use of Wire Arc Additive Manufacturing to rapidly 3D-print 2 lifting plugs of 175kg each, customized for compatibility with existing equipment.



YOUR PARTNER, SETTING  
THE PACE FOR INNOVATION  
AND PERFORMANCE  
EVOLUTION



- ROLLING MILLS
- FOREST & MINE
- FINISHING UNITS
- STEEL MILL
- VAM® FIELD SERVICES AND SALES
- R&D CENTERS

NEED MORE  
INFORMATION?

Information is available online on [solutions.vallourec.com](https://solutions.vallourec.com) or by scanning the following QR code.



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