

JAURE®



JAURE® COUPLINGS

OVERVIEW

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YOUR TEAM

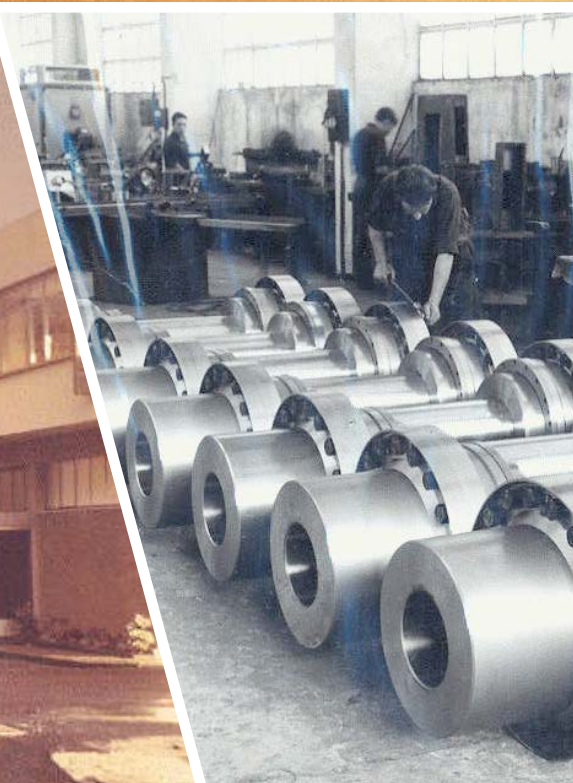
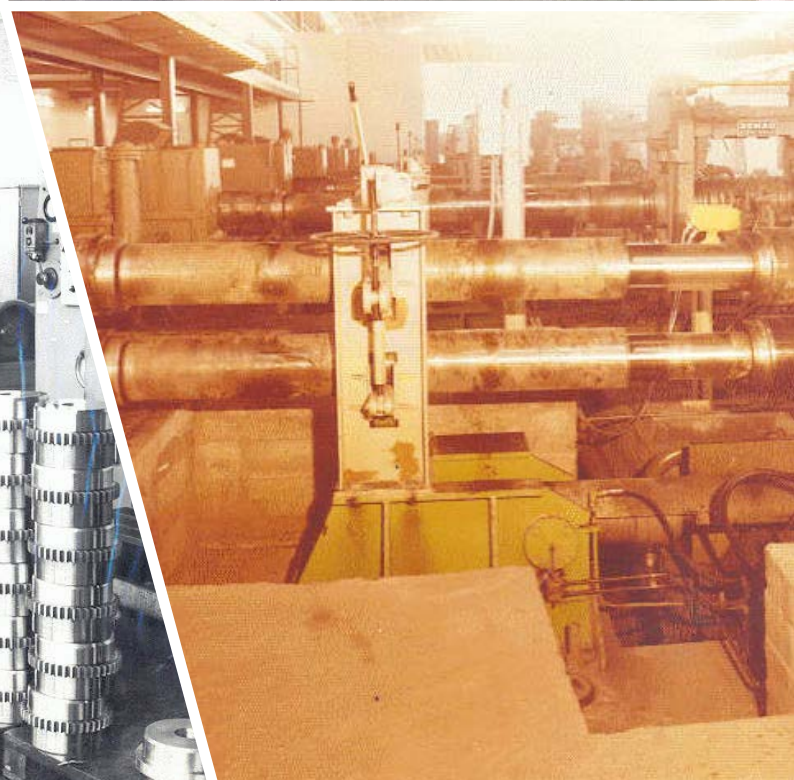
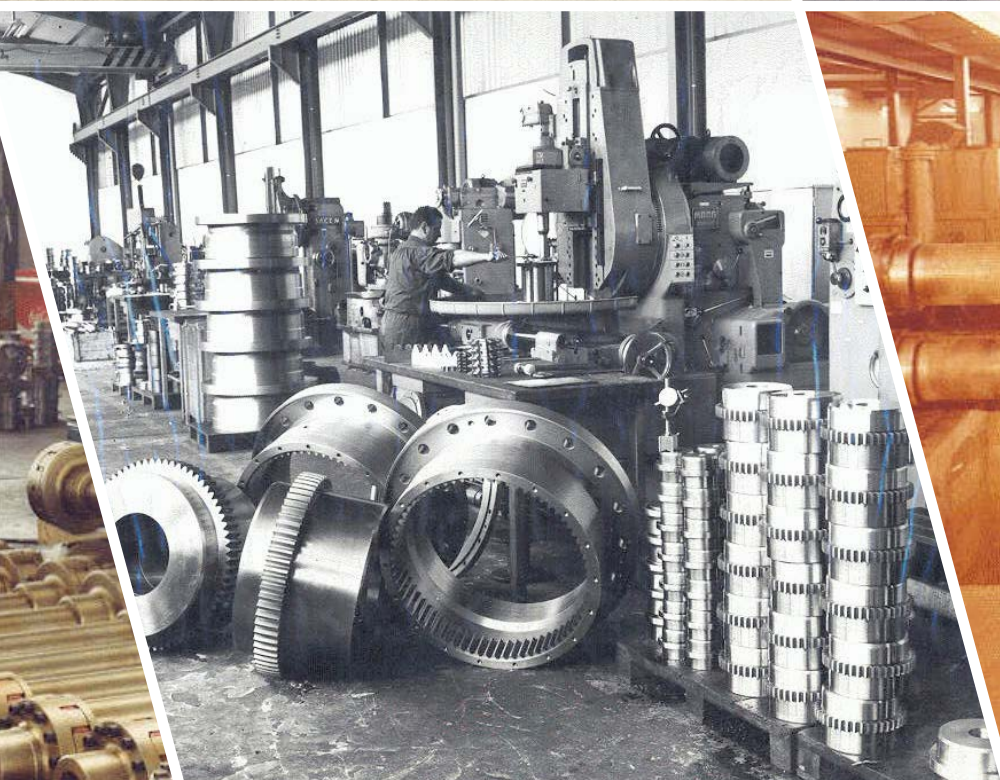
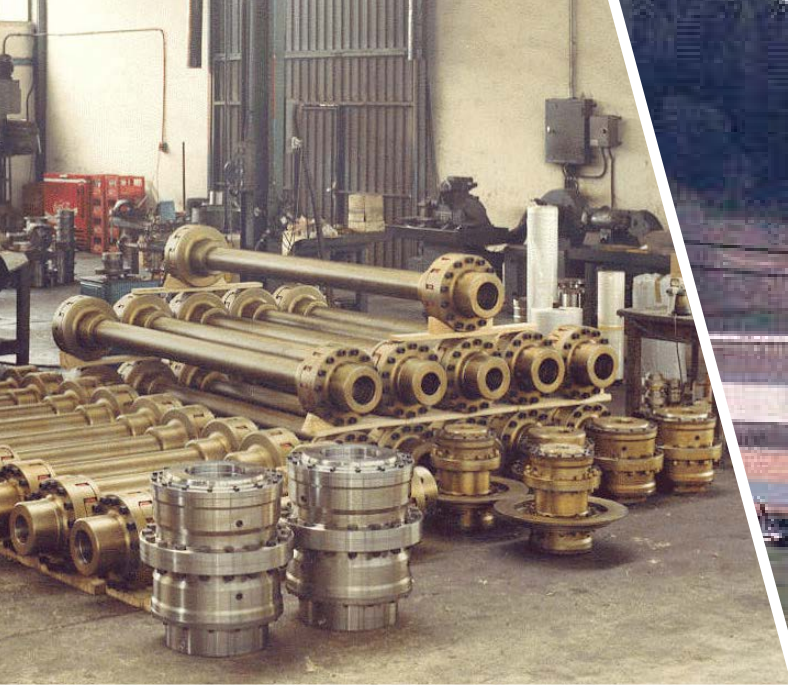
We started as a small team in Zizurkil, Spain. Now, more than 60 years later, we are a global team ready to provide turnkey power transmission solutions for your applications.



REGAL Jaure
Ernio bidea s/n
20159 Zizurkil

INDEX

\ Introduction	6
\ All over the world and close to you	8
\ R+D+i = Innovation	10
\ Quality & EHSS	12
\ Our Industries	14
General Industry	16
Metals & Heavy Duty	18
Marine	20
Wind	22
Lifecycle Services	24
\ Our solutions	26
Our latest success stories	28
\ JAURE® couplings manufacturing program	30
\ KOP-FLEX® & JAURE® couplings manufacturing program	33
\ Our locations	34
\ JAURE® couplings sales network	35



WORKING SINCE 1958 TO DRIVE YOU TO A BETTER TOMORROW



ORIGIN

Our Jaure® couplings business started back in 1958 in a machining workshop in Zizurkil, Basque Country, an industrialized area with strong steel and iron tradition in the north of Spain. We began manufacturing flexible couplings in 1970 with the production of our first gear coupling, the MS series.

PRESENT

Since February 2015, Jaure® and Kop-Flex® have been two brands of Regal Beloit Corporation's Power Transmission Solutions business segment.

The integration of the Jaure coupling business as part of Regal has strengthened our presence worldwide with sales, engineering and manufacturing capabilities in Europe, Asia and United States.

The whole world is on the move today. Everything from people and products to ideas and information. As leading suppliers of Power Transmission Solutions, we help your business move forward. Whether it's helping to make sure that minerals are extracted, steel is transformed, cement or paper is manufactured, goods are stored and transported or energy is produced, we have a solution for you.

FUTURE

We cannot know what the future will bring us... but we know that we will be close to you. We work tirelessly today so that we can offer you the most challenging solutions tomorrow, from couplings to complete driveshaft solutions including torque monitoring and service.



ALL OVER THE WORLD AND CLOSE TO YOU

A GLOBAL REACH

Our company has a global supply chain and distribution network all around the world thanks to a number of manufacturing and service centers.

We serve industries as diverse as our solutions themselves. We work closely to our customers to understand their day-to-day challenges and offer them tailored solutions that bring innovation to every application.

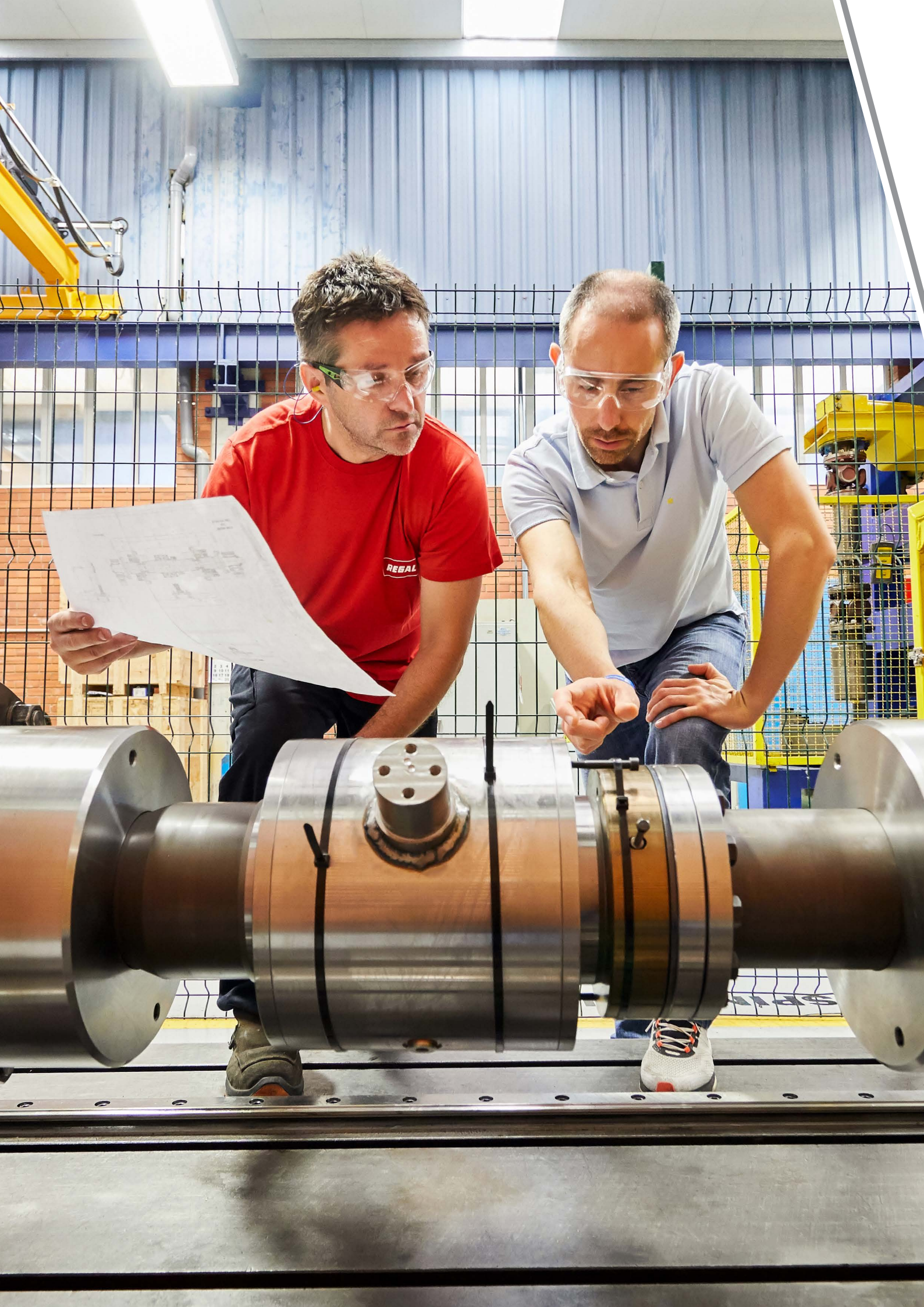
The real innovation behind our products comes from our people. Our engineers study your unique industry challenges as thoroughly as their own areas of expertise.

Meanwhile, our sales force and field service personnel focus on understanding the challenges of every customer, in every marketplace and industry.

Our customer service team always will be available to you, to address your questions and assist with your daily issues.

Please refer to page 35 for further information about our global presence.





R+D+I = INNOVATION

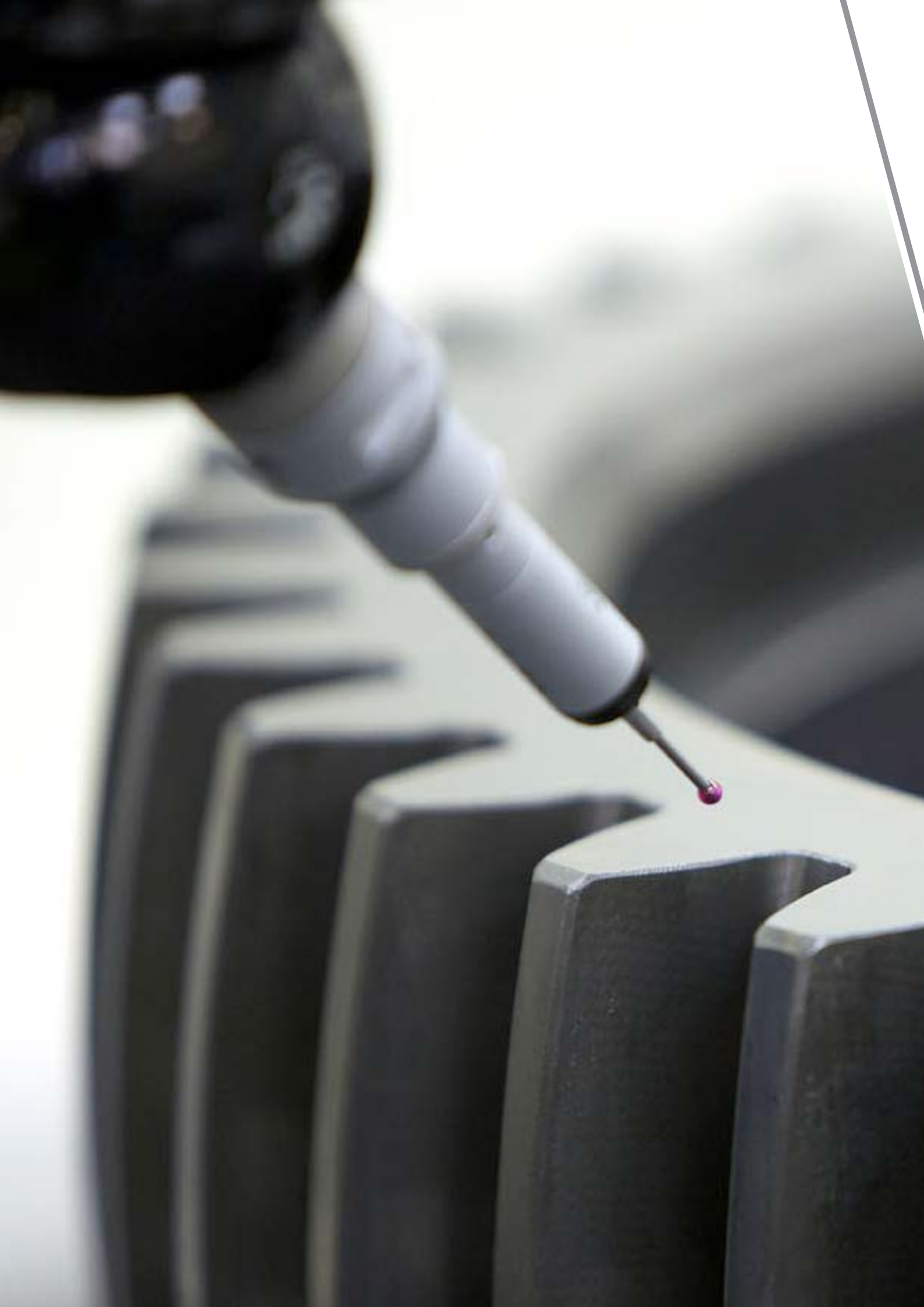
We develop our products and technologies through innovation, research and continuous product improvement, bringing the highest possible value to our customers.

We have our own proficient and dependable in-house Regal engineering teams in Spain, United States and India. We also work closely with external technology centers such as Tecnalia, CEIT, Tekniker...



Due to our commitment to anticipating future challenges and providing added value to our customers with creative solutions, we continuously invest in new test benches.

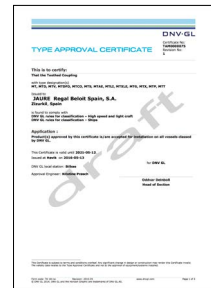
As a result, we are global market leaders in delivering customized solutions for the world's most powerful wind test benches. Find more in our "Success stories" at page 28.



QUALITY & EHSS

The design, production, sale and service of all Jaure® couplings and transmission elements are integrated into our Management System, which conforms with both the UNE-EN-ISO 9001 and OHSAS 18001 standards certified by DNV (Det Norske Veritas).

In addition, Regal, with its Jaure couplings, is a leading supplier in the marine industry and our products also can be delivered with the 3.2 certificate of any marine classification society.



We also have several type approvals and were awarded the DNV MSA certificate. This reflects our commitment to continuously improve the service and response time to our customers and remain competitive in the marketplace.

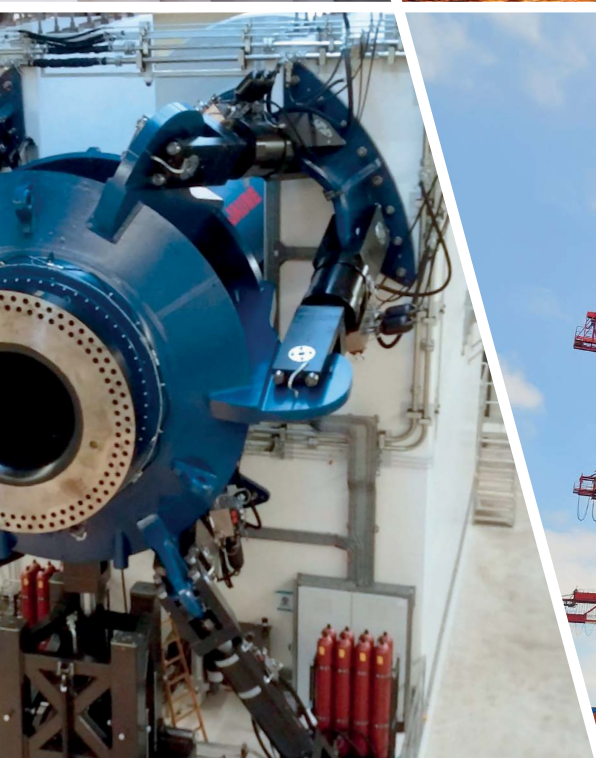
At Regal, we foster a culture of comprehensive responsibility. The way we do business, the people we employ, the environment around us, and the communities in which we live and work all play important roles in how we behave as a company. In practice, this means constantly evaluating our actions through the triple bottom line perspective of People, Planet and Profit. Doing so challenges us to develop long-term strategies for sustained growth and value.

We understand Responsibility requires a continuous improvement of our products accomplished through the excellence of our people and processes. This translates into the manufacturing and supply of our couplings and services by efficiently observing the most demanding safety and sustainability regulations.





OUR INDUSTRIES



GENERAL INDUSTRY

THE MOST SUITABLE
JAURE® COUPLING FOR ANY
APPLICATION.

Whenever we need to connect two machines and transmit power from one shaft to the other, there is a need for a coupling.

The Jaure coupling portfolio offers a wide range of flexible couplings: gear, disc pack, elastic, barrel, etc.

We are couplings experts in a wide variety of applications, such as:

- Cranes & Hoisting
- Pulp & Paper
- Minerals, Mining & Cement
- Pumps
- Etc.

Both standard and ETO couplings are available in our wide portfolio, available off the shelf and anywhere. We will adapt our offering to fit your application.



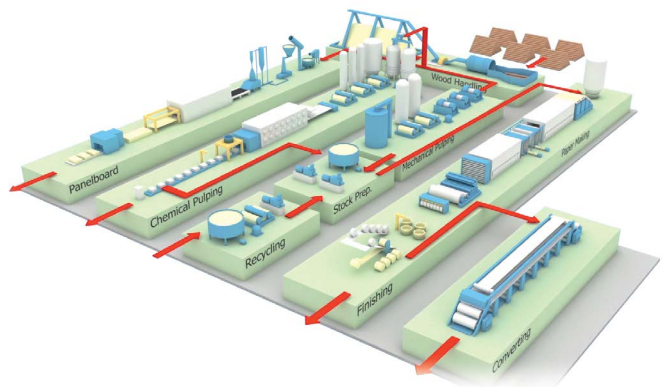
JAURE® GENERAL INDUSTRY APPLICATION EXAMPLES

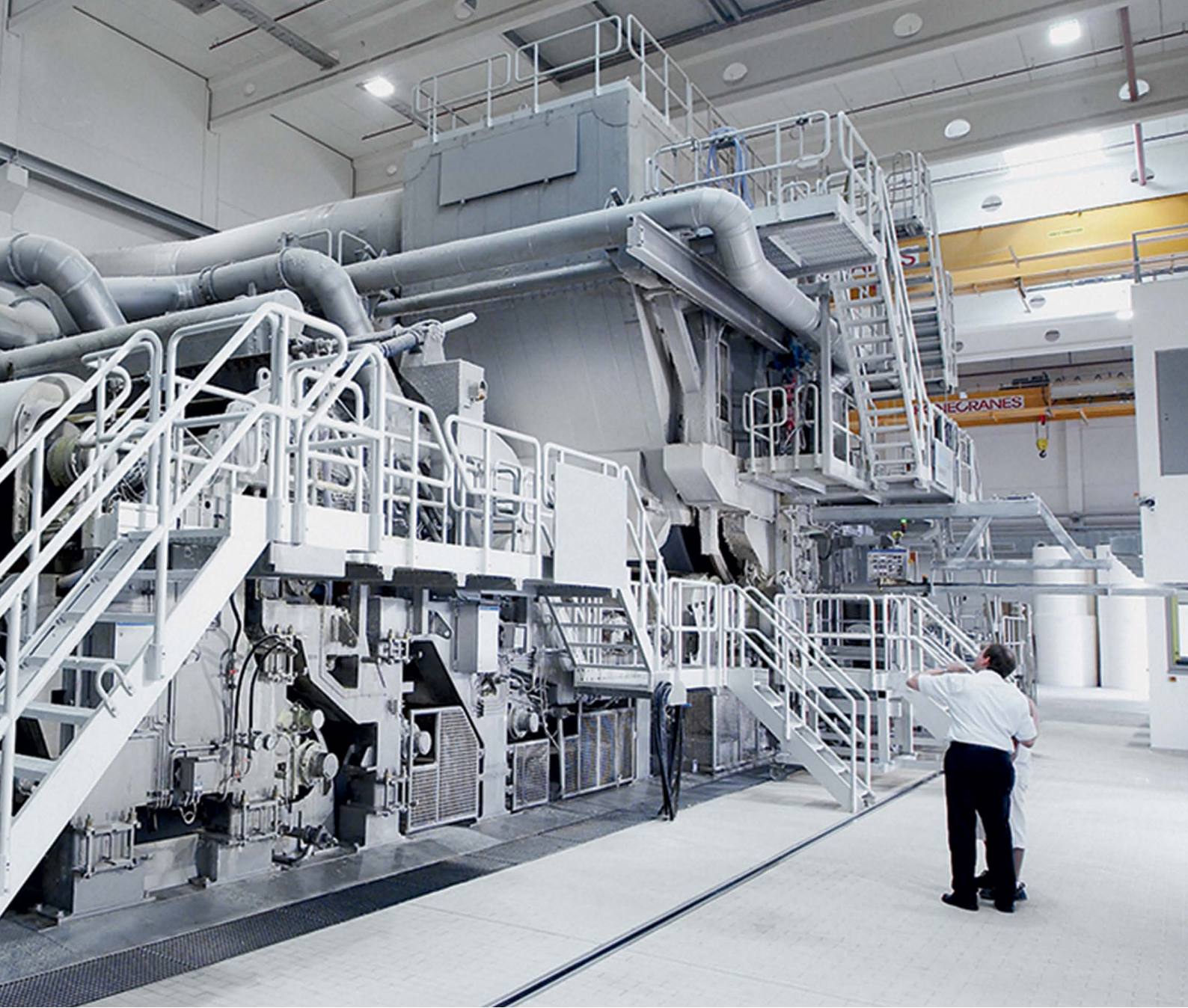


01

PULP AND PAPER

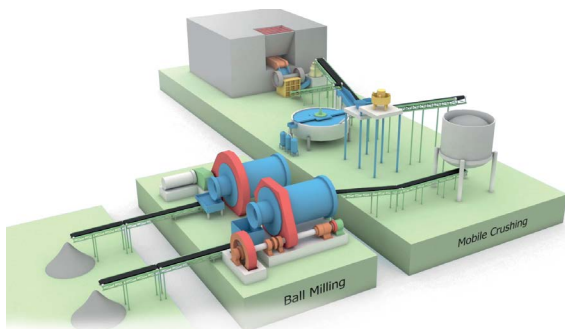
From wood handling and bark processing to pulp & paper production





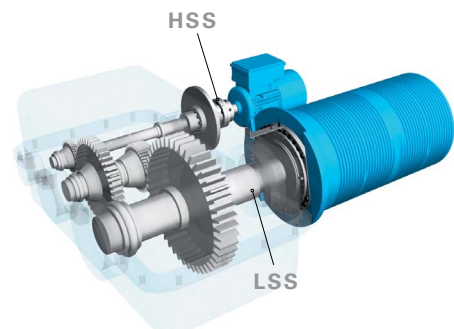
02 MINERALS, MINING AND CEMENT

From conveyors to highest torque requirements in mills



03 CRANES AND HOISTING

Jaure® high speed and low speed couplings solutions



METALS & HEAVY DUTY

SOLUTIONS FOR ALL STAGES OF STEEL PRODUCTION.

With more than 100 years of combined experience in the metal industry, Jaure® and Kop-Flex® products provide innovative solutions in the steel, aluminum and copper industries. Our product portfolio includes gear and elastic couplings and spindles for steel production, in hot and cold rolling mills, processing lines and finishing lines, for both new plants and modernization of old ones.

Close partnership with the customer is key to success. Our highly trained and experienced engineers provide not only products tailored to each special application, but also the needed service and torque monitoring. We aim for optimum performance of the mill across its lifetime.



JAURE® METALS & HEAVY DUTY APPLICATION EXAMPLES



01

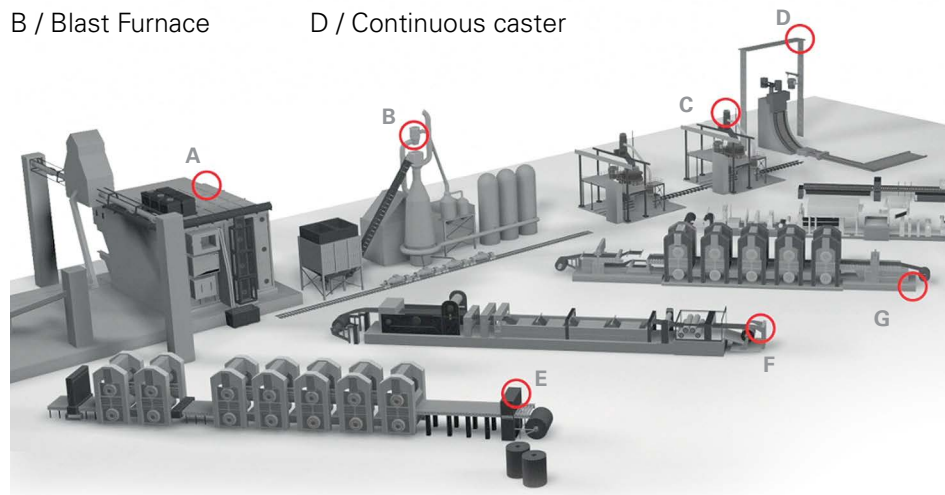
ENGINEERED SPINDLES AND COUPLINGS FOR THE METALS INDUSTRY

A / Coke ovens

C / Basic oxygen furnace

B / Blast Furnace

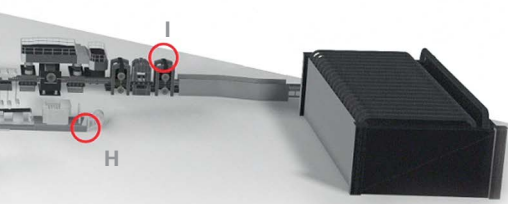
D / Continuous caster





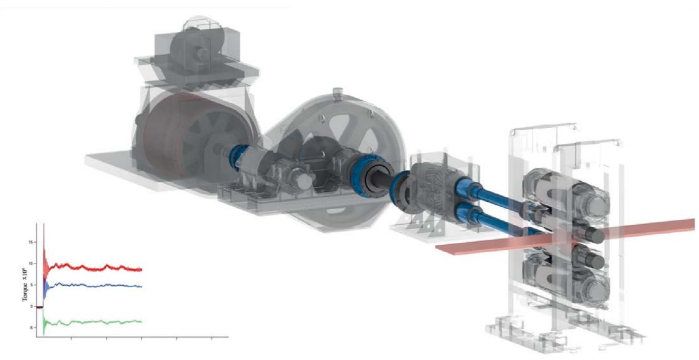
E / Hot mill
F / Pickling

G / Cold mill
H / Galvanizing - annealing
I / Bar mill



02

REAL TIME DRIVE MONITORING



MARINE

CLASS APPROVED DRIVE SHAFT SOLUTIONS

We study our marine industry customers' needs in depth and are aware of their need for complete solutions.

With over 50 years of experience in marine applications, thousands of Jaure® couplings are driving all types of vessels: offshore support vessels (OSV), ferries, yachts, patrol boats, windfarm support vessels (WFSV), landing crafts...

We have also engineered-to-order solutions for dredging (including underwater), and winch drives.

Our marine portfolio includes:

- Flexible couplings, torsionally rigid and elastic
- Shafting, in steel (solid and hollow) and composite (glass fiber and carbon fiber)
- Hydraulic rigid couplings
- Other components needed in drive train: bearings, bulkhead seals, braking solutions, etc.

All products are offered with approval of marine classification societies and Type 3.2 Inspection Certificates on demand.

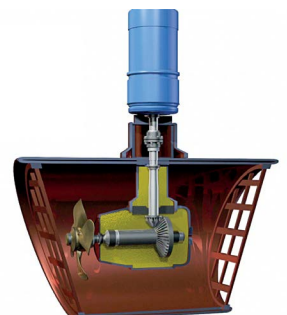


JAURE® PRODUCTS MARINE APPLICATION EXAMPLES



01 MAIN PROPULSION & MANEUVERING

- Thrusters
- Propellers
- Waterjets





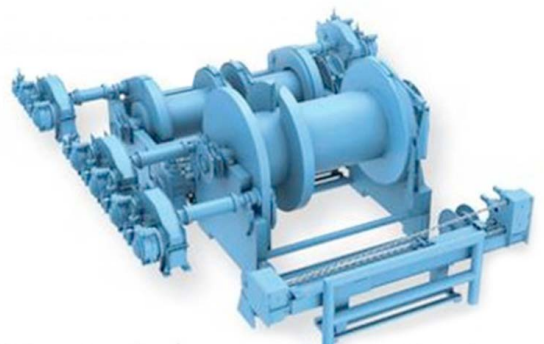
02 DREDGING

- *Inside machine room*
- *Suction dredgers*



03 WINCHES

- *Mooring*
- *Anchor handling & towing*



WIND

LATEST GENERATION AND MOST RELIABLE SOLUTIONS.

We offer one of the widest range of solutions and technologies available in the market.

Windmill couplings typically include all components at the HSS such as torque limiters (JFTL), brake discs, spacers (electrically insulating available) and different types of connections to the shafts, offering a complete package to fit each specific windturbine.

Our program includes torsionally flexible and torsionally rigid couplings, covering the whole range of power from 300 Kw up to 10 Mw (and beyond) at all speeds (HS, MS and LS).

We work under the requirements of wind classification societies and are certified by DNV-GL.

We also provide turnkey solutions for advanced wind test bench projects. We offer innovative solutions that represent state of the art technology.

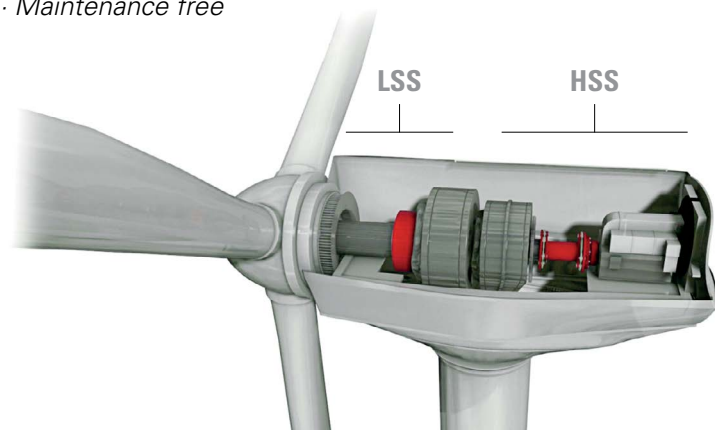


JAURE® COUPLINGS WIND APPLICATION EXAMPLES



01 WINDTURBINES (HSS and LSS)

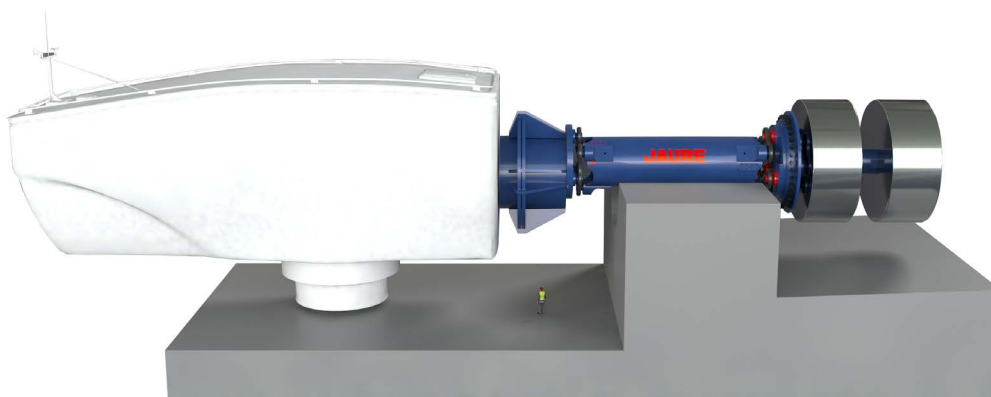
- *Compolink® and Lamilink flexible couplings*
 - High misalignment capacity
 - Maintenance free
- *JFTL torque limiter*
 - High accuracy and repeatability
 - Long service life





02 TEST BENCHES

Advanced solutions for test benches: Highly Accelerated Lifecycle Testing (HALT) and functional test benches for the largest wind turbines.



LIFECYCLE SERVICES

AVOIDING DOWNTIME IS CRITICAL

Jaure® and Kop-Flex® couplings and services can help you recognize significant savings in several applications such as hot and cold mills, edger drives, bridle rolls, levelers, etc.

DRIVE TRAIN MONITORING

The emergence of high strength steels has reduced rolling mill drive train reliability due to increased rolling forces required to process these new products. Reducing the peak torques and vibratory torques is one approach to prolong the life of drive train components and can be accomplished by altering the system of torsional dynamics. Jaure® and Kop-Flex® torque monitoring services can demonstrate how to model the dynamic torsional response, normalize the model with empirical data and evaluate the effectiveness of increased dampings and stiffness changes.

LET THE EXPERTS PROVIDE YOU WITH BOTH AN ANALYSIS AND A RECOMMENDATION

Unfortunately, no mechanical product can last forever and couplings are no exception. While our products are designed and built to last, many applications are so severe that rapid wear and/or coupling damage may occur.

SYSTEM TUNING

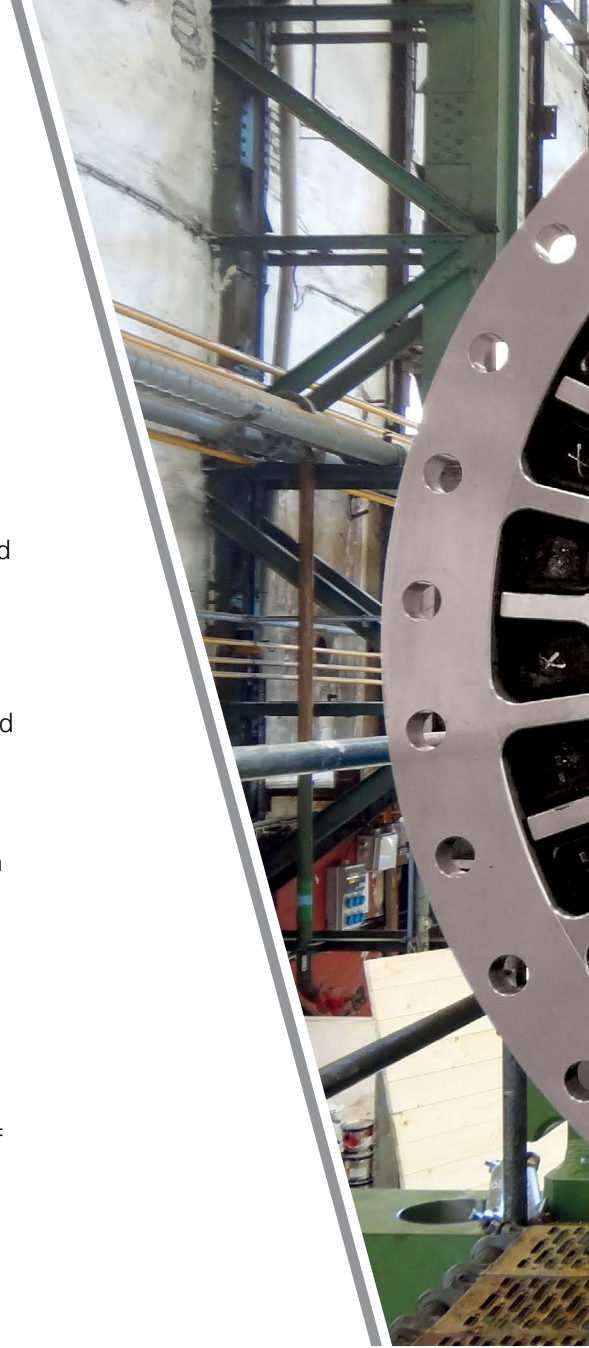
In many cases, rolling stands are subject to frequent mechanical failures and motor problems causing unplanned downtime and expensive repairs. By installing strain gage telemetry systems on gear spindles, actual torque measurements can be collected. TAF values can then be measured and evaluated for peak torques and their effect on the power transmission components. The largest reduction in TAFs can usually be achieved by installing damping style couplings or modifying spacer type couplings from a tubular to a solid design. Damping style couplings and spacer stiffness changes can result in a reduction of peak torques and increase reliability of the drive train.

Jaure® and Kop-Flex® brands are supported by the largest and most experienced engineering staff in the industry, with an arsenal of modern analysis tools at our disposal, including FEA and a staff dedicated to coupling service. Let our technical experts provide recommendations on how to help prevent coupling problems and premature drive train failures.

01

JAURE® AND KOP-FLEX® COUPLINGS SERVICE CENTERS OFFER:

- *Real time drive train monitoring*
- *Repair and refurbishment*
- *Expert failure analysis*
- *Cost savings through consultation*
- *Filed technical service*

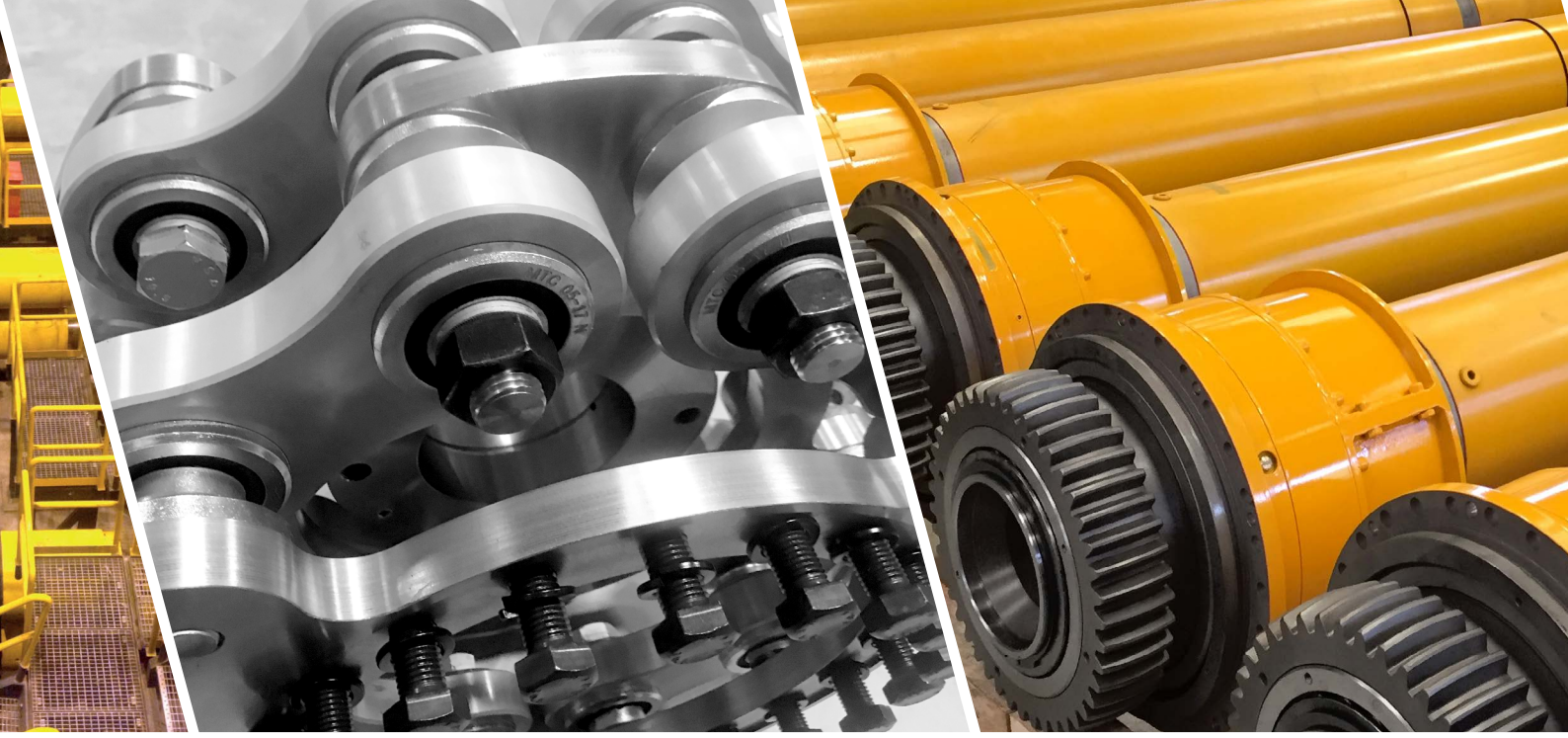




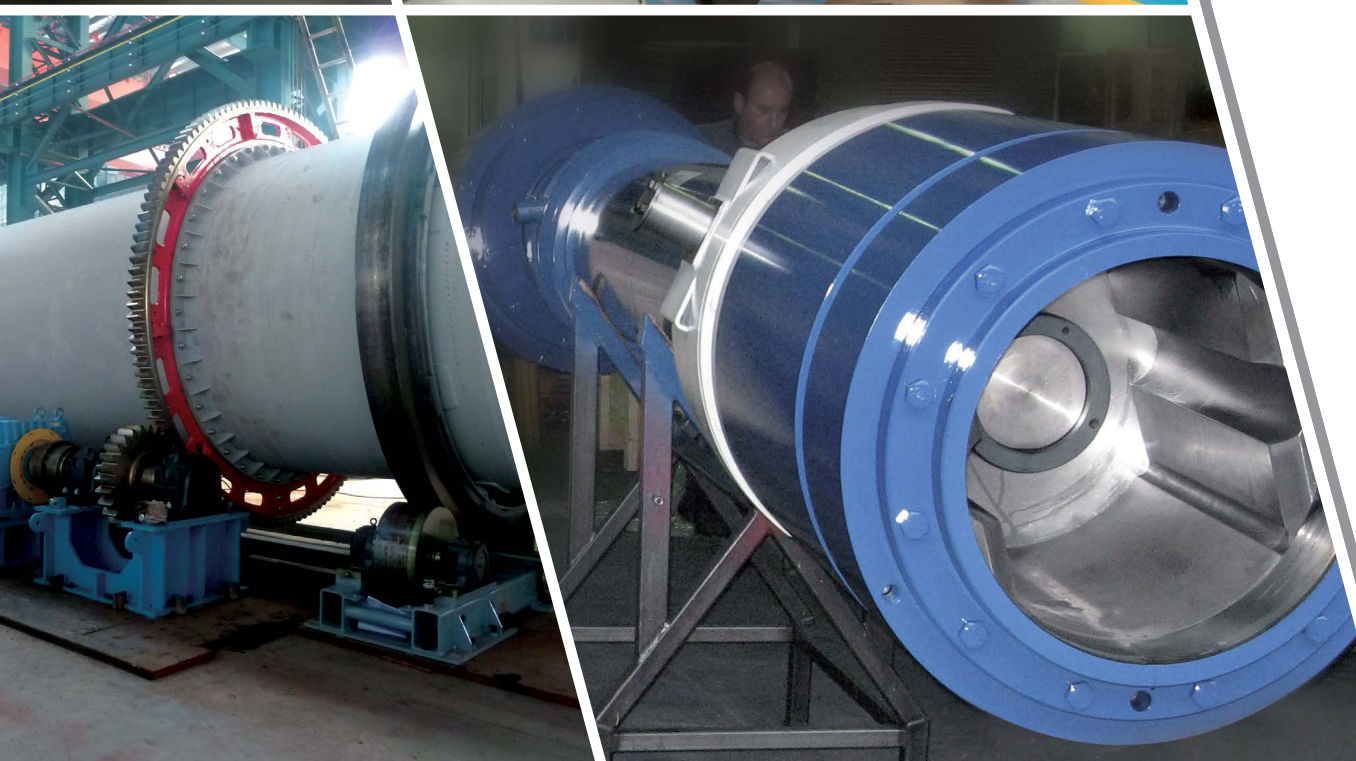
02



Jaure® and Kop-Flex® brands offer the added support of Lifecycle services to help ensure your mill operates efficiently and the production keeps moving.



OUR SOLUTIONS



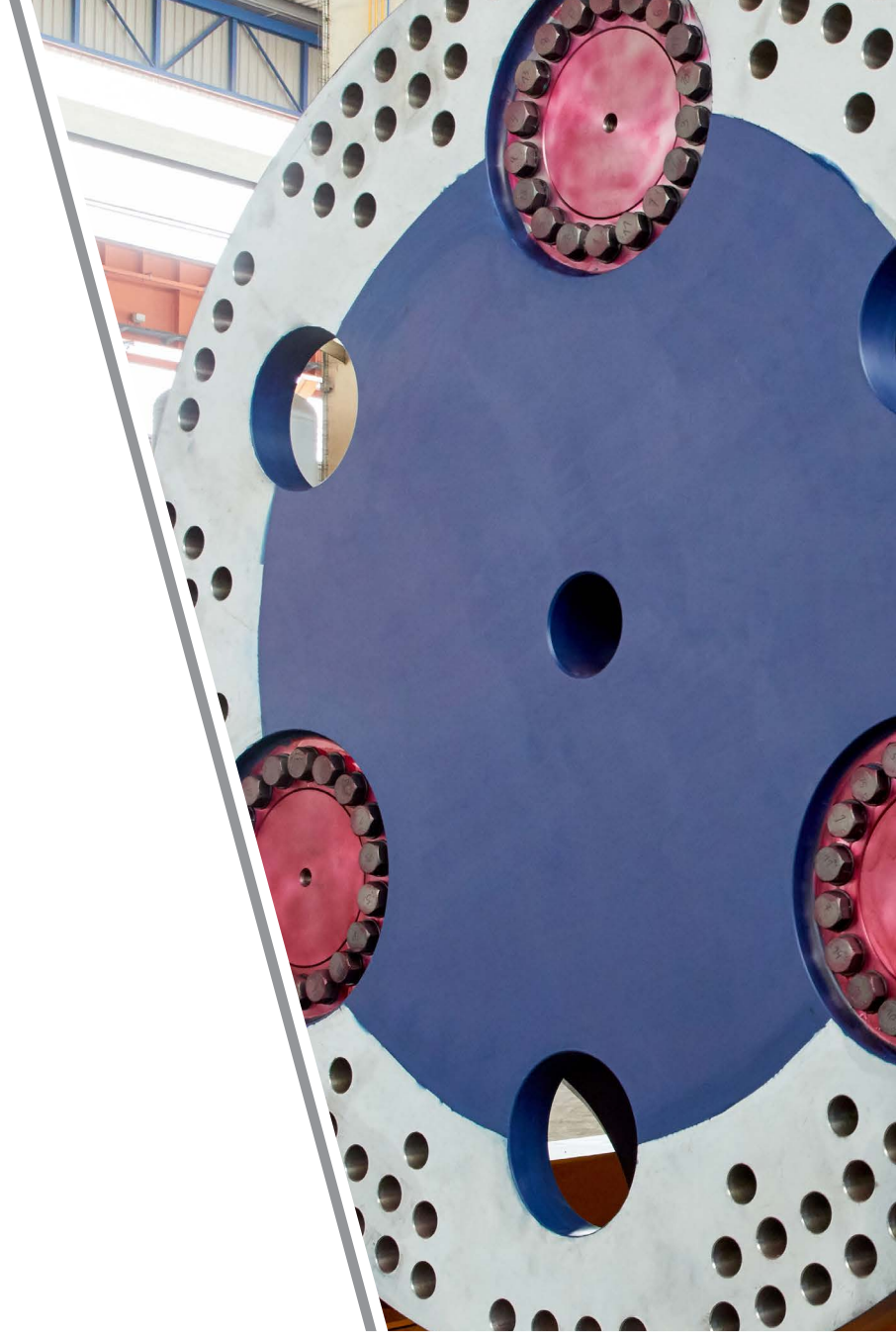
OUR LATEST SUCCESS STORIES

Based on a long, successful history, today we can shout to the four winds that we are contributing to the movement of countless mechanisms all around the world in the form of small, medium, big or huge couplings. These couplings can be both standard or special and unique designs.

But we offer much more than just couplings and drives.

We will learn your application, listen to your needs and offer you a customized turnkey solution.

A unique project recently delivered by Regal using Jaure® couplings and shafts for one of the biggest wind test benches in the world is shown on the right. A 4m outer diameter metallic ball joint coupling. 97 Ton. 15MNm (nominal) - 20MNm (overload). For testing 25 years' service life in less than 6 months. Real (1:1) wind turbine.



01 JCFS-FP 23M DRIVES FOR PSV (4000 kw@600 rpm)

Jaure® Carbon Fiber Shafts (JCFS) are the best light weight alternative to conventional steel drive shafts. First introduced in high speed vessels, they are now making inroads in many other vessels such as dredgers, supply vessels, ferries, patrol boats, etc. A few years ago, we developed JCFS shafts with Fire Protection (JCFS-FP), that allows crew evacuation in case of fire onboard the vessel.



02 FOUR STAND HOT ALUMINIUM FINISHING MILL SPINDLES

We supplied 10 carburized gear spindles for a new four stand aluminum mill. The mill, during phase I, has an annual production capacity of 60.000 Tons.





03 PROJECT AT STEEL MILL

Regal provided a large hybrid coupling comprised of a Kop-Flex® Max-C® resilient coupling combined with a Jaure® MTG gear coupling at a steel mill. The complete assembly has a length of over 4 m and a total weight of 20 Tn. The challenging application for this coupling is the main drive of a heavy section rolling mill that helps form large steel structural shapes.

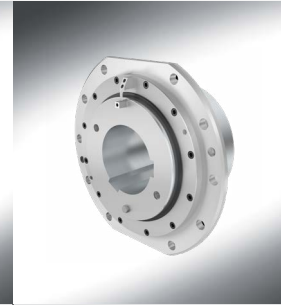


04 ETO MOTORS TEST BENCH PROJECT

In this particular project, where interchangeability and ease of assembly were essential requirements, we supplied several special LAMIDISC® disc pack couplings (diameters above 900mm) for motor test benches lines.



JAURE® MANUFACTURING PROGRAM



PRODUCT BRAND NAME	MT	LAMIDISC®	LAMILINK	BARFLEX™
TYPE & DESCRIPTION	Gear	Disc pack	Metallic Link	Barrel (drum type)
INDUSTRY APPLICATION				
Metals & Heavy duty	●	●	●	●
Minerals & Mills	●	●	●	●
Crane & Hoisting	●	●	●	●
Pulp & Paper	●	●	●	
Petrochemical / Oil & Gas	●	●	●	
Cooling Towers		●	●	
Machine Tools		●	●	
Marine	●	●	●	●
Wind Turbines		●	●	
Test Benches	●	●	●	
Railway	●	●	●	

COUPLINGS



AL-S / AL-SD / ALD	IXILFLEX®	COMPOLINK®	JAUFLEX®	RECORD
Gear spindles	Elastic Link	Composite Link	Elastic	Grid / spring type
•			•	•
			•	•
			•	•
	•	•	•	•
		•	•	•
		•	•	
	•	•	•	
	•	•	•	•
	•	•		•
	•	•		

JAURE[®] MANUFACTURING PROGRAM



PRODUCT BRAND NAME	JGFS / JCFS	JHC / JHC-HF	JFTL TORQUE LIMITER	JS NUT
TYPE & DESCRIPTION	Glass Fiber and Carbon Fiber Composite shafts	Hydraulic Coupling	Torque Limiter	Tensioner
INDUSTRY APPLICATION				
Metals & Heavy duty		●	●	●
Minerals & Mills		●	●	●
Crane & Hoisting			●	●
Pulp & Paper	●			●
Petrochemical / Oil & Gas	●			●
Cooling Towers	●			●
Machine Tools	●			●
Marine	●	●	●	●
Wind Turbines	●	●	●	●
Test Benches	●	●		●
Railway			●	●

KOP-FLEX® & JAURE® MANUFACTURING PROGRAM

COUPLINGS



PRODUCT BRAND NAME	MAX-C®	HIGH PERFORMANCE PROGRAM			KOP-FLEX GREASE	SERVICE
TYPE & DESCRIPTION	HEAVY DUTY ELASTIC COUPLING	GEAR	DISC	DIAPHRAGM	GEAR COUPLING / SPINDLE GREASE	REPAIR & MAINTENANCE PROGRAM
INDUSTRY APPLICATION						
Metals & Heavy duty	●				●	●
Minerals & Mills	●				●	●
Crane & Hoisting	●				●	●
Pulp & Paper					●	●
Petrochemical / Oil & Gas	●	●	●	●	●	●
Cooling Towers					●	●
Machine Tools					●	●
Marine	●	●	●	●	●	●
Wind Turbines	●				●	●
Test Benches	●	●	●	●	●	●
Railway	●	●			●	●

OUR LOCATIONS

MANUFACTURING FACILITIES & ENGINEERING CENTERS



Jaure® & Kop-Flex® engineered couplings are designed, manufactured, sold and serviced worldwide, with service provided from specification right through to installation.

Facilities around the globe are state of the art, with access to a large and experienced engineering staff

focused on providing solutions for our customers' requirements.

A dedicated global sales and service team assists you to find the best choice and manage all your coupling needs.

COUPLING MANUFACTURING FACILITIES



Zizurkil, Spain



Nove Mesto, Slovakia



Zhangzhou, China



Milwaukee - USA

ENGINEERING CENTER



Apodaca, Mexico



Pune, India

REGAL PTS HEADQUARTERS



Florence, KY - USA

REGAL HEADQUARTERS



Beloit, WI - USA

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JAURE®

www.regalbeloit.com

Regal brands for Power Transmission Solutions:



APPLICATION CONSIDERATIONS

The proper selection and application of products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Regal Beloit America, Inc. and/or its affiliates ("Regal") with respect to the use of products and components is given in good faith and without charge, and Regal assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

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