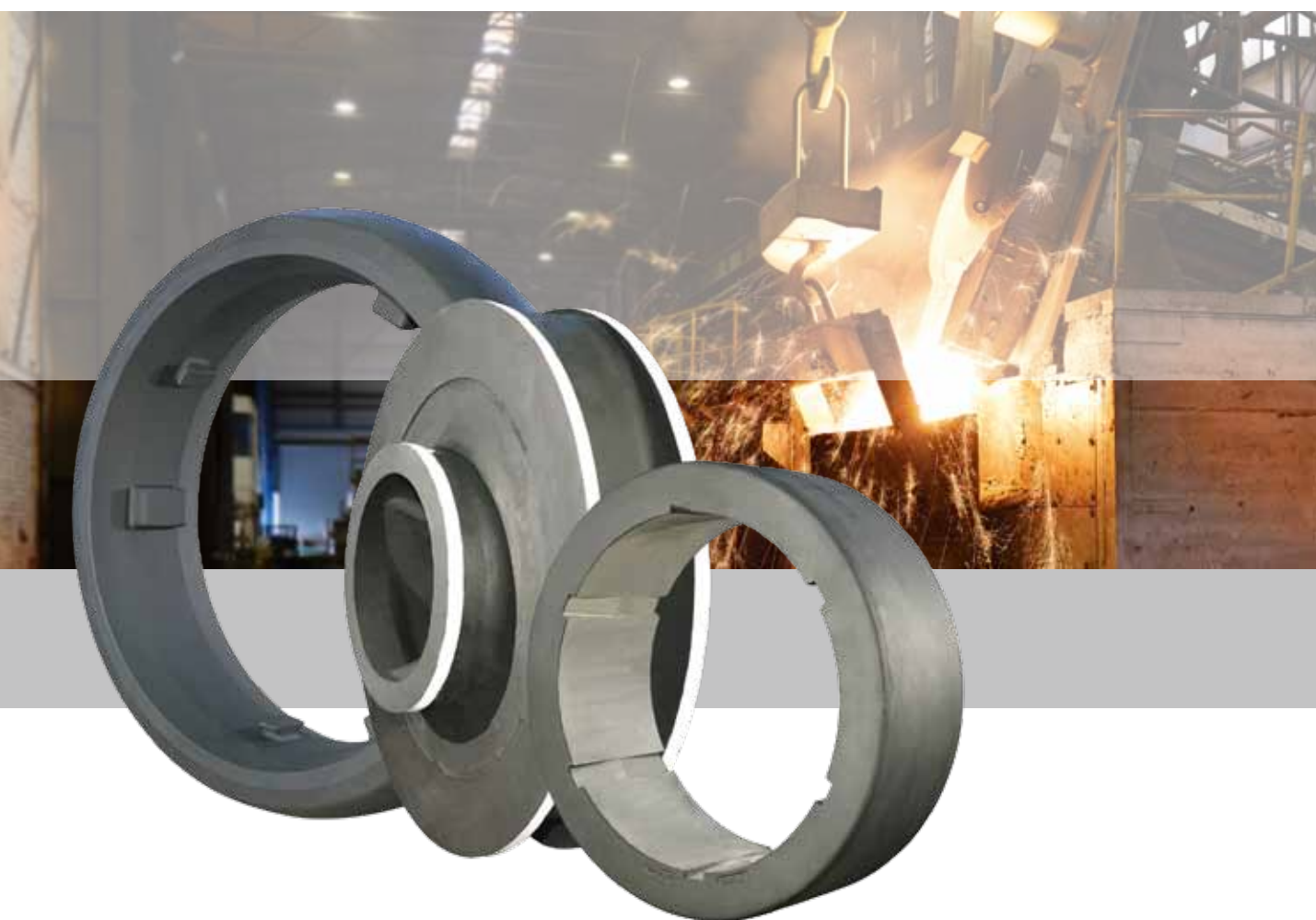
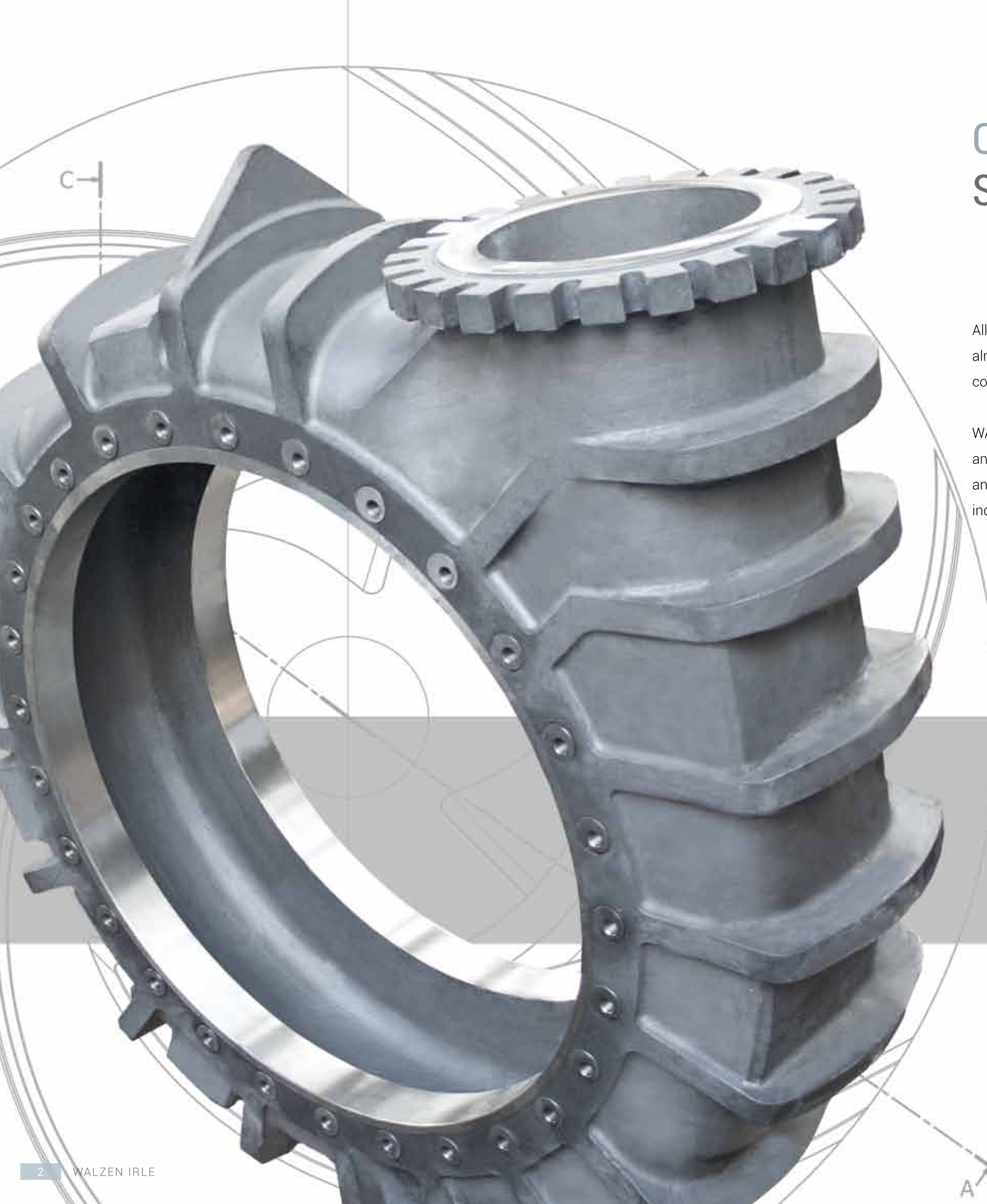


WEAR RESISTANT CASTINGS





QUALITY WITH TRADITION SINCE 1820

All around the world WALZEN IRLE is well known as a manufacturer of high quality castings. For almost 200 years of production our company stands for a wide experience, high technological competence as well as continuous research and development.

WALZEN IRLE produces rolls for the steel-, paper-, rubber-, plastic- and food-industry, roller shells and grinding plates for vertical mills (coal grinding, cement production and similar), runner rings and roller shells for the tile and brick industry, as well as castings for solid matter pumps (dredging industry).

All applications have one important target in common: Decrease the wear and increase the lifetime! Wear resistant finished castings by WALZEN IRLE are used in industrial areas in which wear plays a cost intensive role. This requires tools and components that are as resistant as possible under extreme wear demands.

INCREASE YOUR PROFIT – WITH OUR KNOWLEDGE!

WEAR RESISTANT CASTINGS MADE BY WALZEN IRLE

The production of wear resistant castings has been an important part of our product range for many years now. WALZEN IRLE wear resistant castings are used in industries where wear is significant and cost intensive. Castings are required which are wear resistant even under extreme conditions. These castings are able to minimize costs for wear related replacement of parts.

WALZEN IRLE offers a wide range of standard materials and special qualities. We also have the possibility to optimize them according to the individual application. In every part of our product range we deal with reduction of wear and optimization of lifetime.

WEAR RESISTANT CASTINGS FOR THE CEMENT INDUSTRY AND POWER PLANTS



WEAR RESISTANT CASTINGS FOR THE TILE AND BRICK INDUSTRY



WEAR RESISTANT CASTINGS FOR THE DREDGING INDUSTRY

Know-how of these different areas is concentrated in our large diversity of qualities.

Ni-HARD IV 500-x



CR 153 500-x



OPTIMIZED MATERIAL QUALITIES

- Chilled cast iron – typical chilled cast iron with white (graphite free) solidified surface
- Pearlitic and acicular nodular iron – with carbide content to increase the wear resistance
- Wear resistant qualities according to DIN EN 12513 (old DIN 1695 – Ni-Hard, chromium iron)
- Optimized and application related special grades of the ICRODUR®-line with improved wear characteristics
- Compound cast qualities produced by spin casting process



For the conveyor line of dredgers we are able to produce pipes out of wear resistant iron by spin casting process with a length up to 3 meter.



WEAR RESISTANT CASTINGS FOR THE DREDGING INDUSTRY

The dredging industry – land reclamation / maintenance of harbors and waterways – requires castings which fulfill the high requirements on abrasive wear. The ideal qualities are the wear resistant white iron qualities. We are producing pump castings, impellers, wear plates, wear bushings and a lot of more.

QUALITIES:

- Predominantly wear resistant white iron qualities as well as special grades of the ICRODUR®-line with improved wear characteristics

WEAR RESISTANT CASTINGS FOR THE TILE AND BRICK INDUSTRY



The tile and brick industry is processing the ceramic base material with wet pan mills and roller mills.

We are producing wear resistant castings for both machines – runner rings/roller shells. Our long time experience is based on the production for famous machine builders, trading companies as well as end-users.

We have the possibilities to produce runner rings and roller shells for all commercial machines.

QUALITIES:

- Chilled cast iron (unalloyed/alloyed) [K40-520 / K40-560]
- Pearlitic nodular iron [SP-520]
- Acicular nodular iron [SA-480]
- Chromium iron [CR 18.1-720]



FOR VERTICAL MILLS FOR THE CEMENT INDUSTRY AND POWER PLANTS

Preferably for grinding of coal at power plants, the production of cement and other similar applications where vertical mills are being used.

WALZEN IRLE is looking back on a long experience in the production of roller shells and grinding plates. We know the operation requirements of the castings well. Our experience – your advantage!

QUALITIES:

- Predominantly wear resistant white iron qualities as well as special grades of the ICRODUR®-line with improved wear characteristics

PRODUCTION PROCESS



PATTERNS

Our customers are welcome to provide their own patterns. Before usage they will be thoroughly checked by us with regards to form tolerances and if necessary they will be adapted or adjusted. We are also in a position to provide you with new patterns made by WALZEN IRLE.

MOULDING

We are manufacturing exclusively manually formed castings. Finish weights up to 35 tons each piece are possible at our moulding shop. For cylindrical shapes it is possible to cast against sand mould or iron chill. Casting against an iron chill mould will create a defined solidification of the casting surface which in turn results in a fine grained structural matrix of the material. A fine grained structure of the material matrix causes a higher wear resistance and subsequently longer life time and reduced maintenance costs.

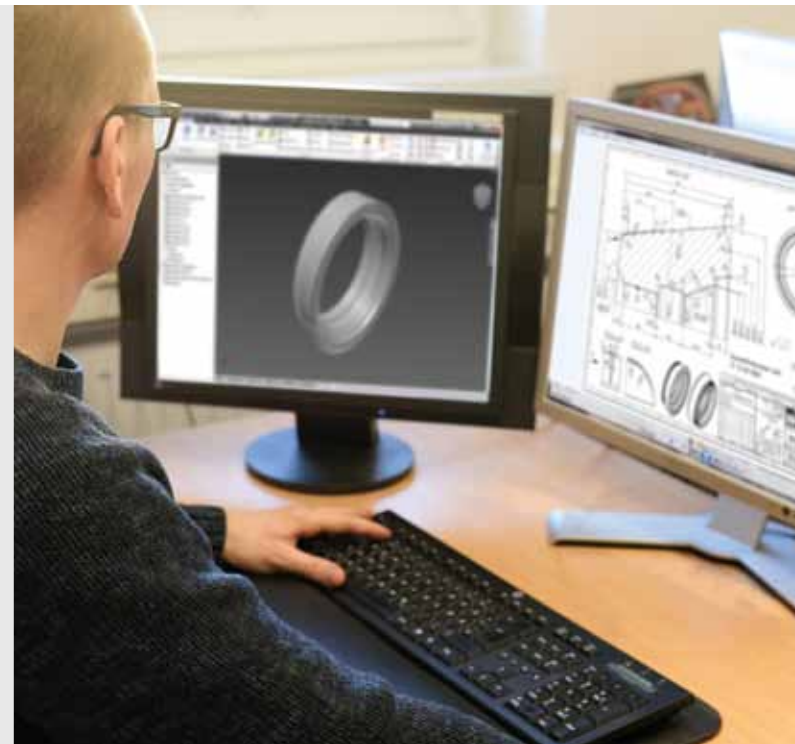
HEAT TREATMENT

The heat treatment of wear resistant qualities (particular Ni-Hard / Chromium iron) is a significant factor to get the desired characteristics. We are annealing our products in special gas fired and computer controlled furnaces with high accuracy level for temperature and time response. This ensures a correct transformation of the material structure and an optimal microstructure is guaranteed.



ENGINEERING

WALZEN IRLE has its own engineering- and calculating department (amongst others, according to FEM-Methods of Finite Elements).



Apart from the preparation of drawings- and order documents the following areas are also covered:

- on-going technical support of the customer regarding our products
- planning of the technical documents for our products
- research and development in cooperation with the metallurgic laboratory
- Patent monitoring

TECHNICAL CONSULTATION AND CONSTRUCTIONAL SUPPORT

- technical sales support
- dimensioning of components according to customers demands
- load-carrying capacity of the components- and fatigue strength analysis
- optimising of the components according to the customer's requirements

QUALITY MANAGEMENT

The high requirements of our customer in the material properties of our products are fulfilled by the specialists in our materials laboratory.

The standard tasks are continuous chemical analyses during the melting- and casting processes, permanent quality controls during all production steps and description of the metallurgic criteria for the manufactured products.

The following essential operations are carried out in the laboratory:

- sales support in the area of application specific material recommendations
- chemical analysis using spectrometer
- measuring the bending and tensile strength
- testing the surface hardness with all, in the industry, accredited measurement- methods
- non-destructive measurements with ultra sonic devices
- non-destructive measurements with eddy-current gauge
- magnetic powder testing
- material tension testing
- surface testing with perthometers
- research and development especially in the area of production methods



The high qualification of our staff in combination with our experience enables us to realise tailor made solutions and customer specific improvements. We are continuously optimising our work process according to the ISO 9001:2008 Quality Management, the ISO 14001:2009 Environment Management and the ISO 50001:2011 Energy Management Systems.



IRLE GROUP

Due to strategic decisions and developments of the structure, the IRLE GROUP had started with a spin-off into IRLE DEUZ GmbH and WALZEN IRLE GmbH in the early 70's of the last century. WALZEN IRLE is a 100 % subsidiary of IRLE DEUZ GmbH.

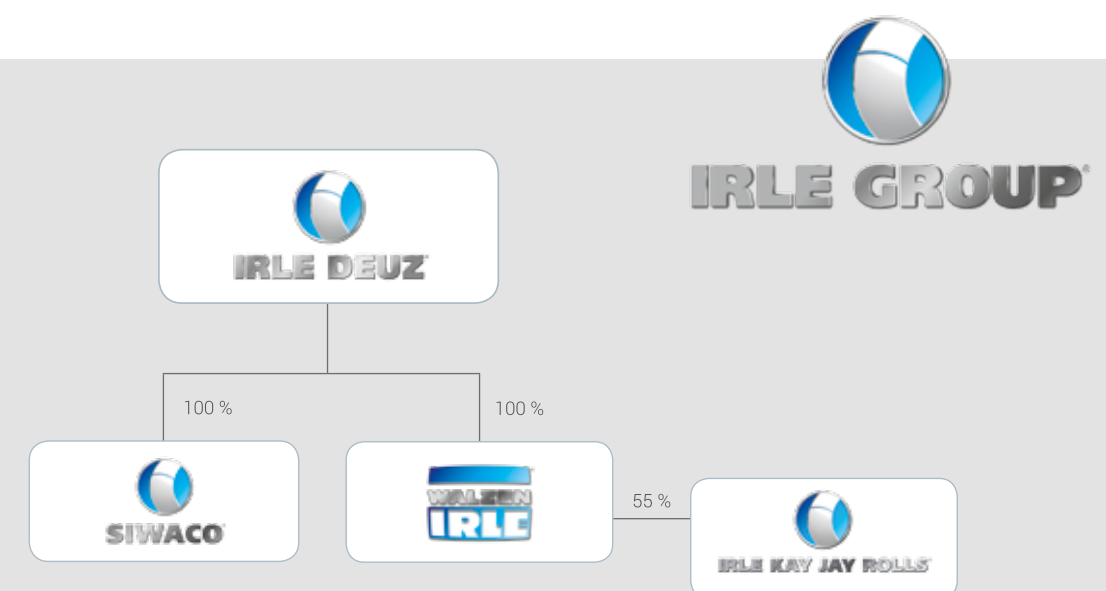
IRLE DEUZ GmbH is the holding of the IRLE GROUP. The IRLE DEUZ Management actively attends strategic developments, organization and business guidelines of the subsidiary companies. The holding provides financial accounting, process planning, work

organization, new constructions as well as maintenance and repairs and operates the it-systems for WALZEN IRLE, SIWACO and IRLE KAY JAY ROLLS.

In 2001 SIWACO GmbH was founded as a service and trading company. SIWACO is a distribution company which is specialized in wear resistant rolls, roll shells and tools for the tube production.

In 2007 a partnership agreement has been closed with the Indian Company Kay Jay Rolls Pvt. Ltd.. Both parties agreed

to build and operate an iron foundry. For this „IRLE KAY JAY ROLLS Pvt. Ltd.“ has been founded. In 2008 the buildings for foundry and workshop have been built, factory equipment has been erected and production processes have been started.



IRLE DEUZ GmbH
Holding Company
www.irl-group.com

WALZEN IRLE GmbH
www.walzenirle.com

SIWACO GmbH
www.siwaco.com

IRLE KAY JAY ROLLS Pvt. Ltd.
www.ikjrolls.com

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