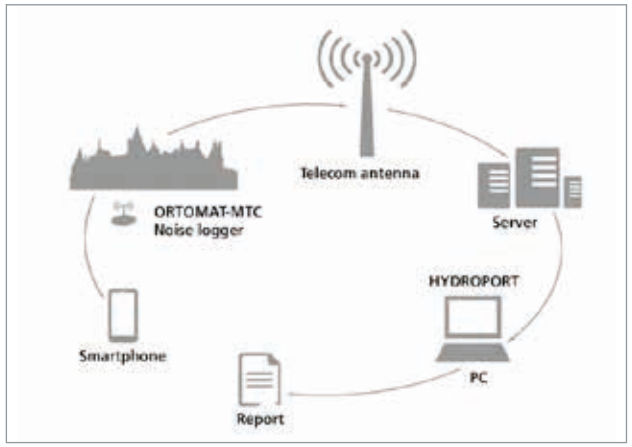
Conservation of resources with intelligent system monitoring

Drinking water and wastewater systems will be in operation for decades. The main tasks of the network operator, apart from secure operation, are servicing and maintenance, plus renewal if necessary. Throughout the entire period of operation, all **resources** must be **used considerately**. In future, digital system monitoring will provide the network operator with ever more reliable support in managing his tasks.



Internet of water:
Data collection – transmission – visualisation

In this way, data management, workflow, controls and quality assurance are systemically simplified. **System monitoring** links waterworks supervisor, service team and management with each other and is the **digital answer** to the demand – which will increase in coming years – for a **reliable water supply** and a meaningful and sustainable optimisation of networks.

DATA + FACTS publications

- Stormwater management with ductile iron pipes
- Resource efficiency of ductile iron pipe systems
- Root resistance of ductile iron pipe joints
- Digitalisation of the water industry
- Trench shoring systems
- Ductile iron pipe systems: products and applications
- Standards, guidelines and technical rules

All folders in the DATA + FACTS series as well as other publications by EADIPS FGR can be downloaded at eadips.org.

Targets and tasks of EADIPS FGR

Information, training and tutoring of specialists and students, promotion of ductile iron pipe systems in planning, installation and operation, standardisation of cast iron pipe systems, presentation of technical and commercial advantages

Products and applications

Ductile iron pipes, fittings and valves

Drinking water and wastewater pressure pipelines, sewers and drains, pipelines for extinguishing water, turbines, cooling water and snow-making equipment

EADIPS® FGR®
European Association for Ductile Iron Pipe Systems
Fachgemeinschaft Guss-Rohrsysteme

Resource efficiency of ductile iron pipe systems

Substitution in the manufacturing process · Recycling economy reduces environmental pollution · Ecological and economic sustainability criteria · Digitalisation optimises supply networks

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Resource efficiency of ductile iron pipe systems

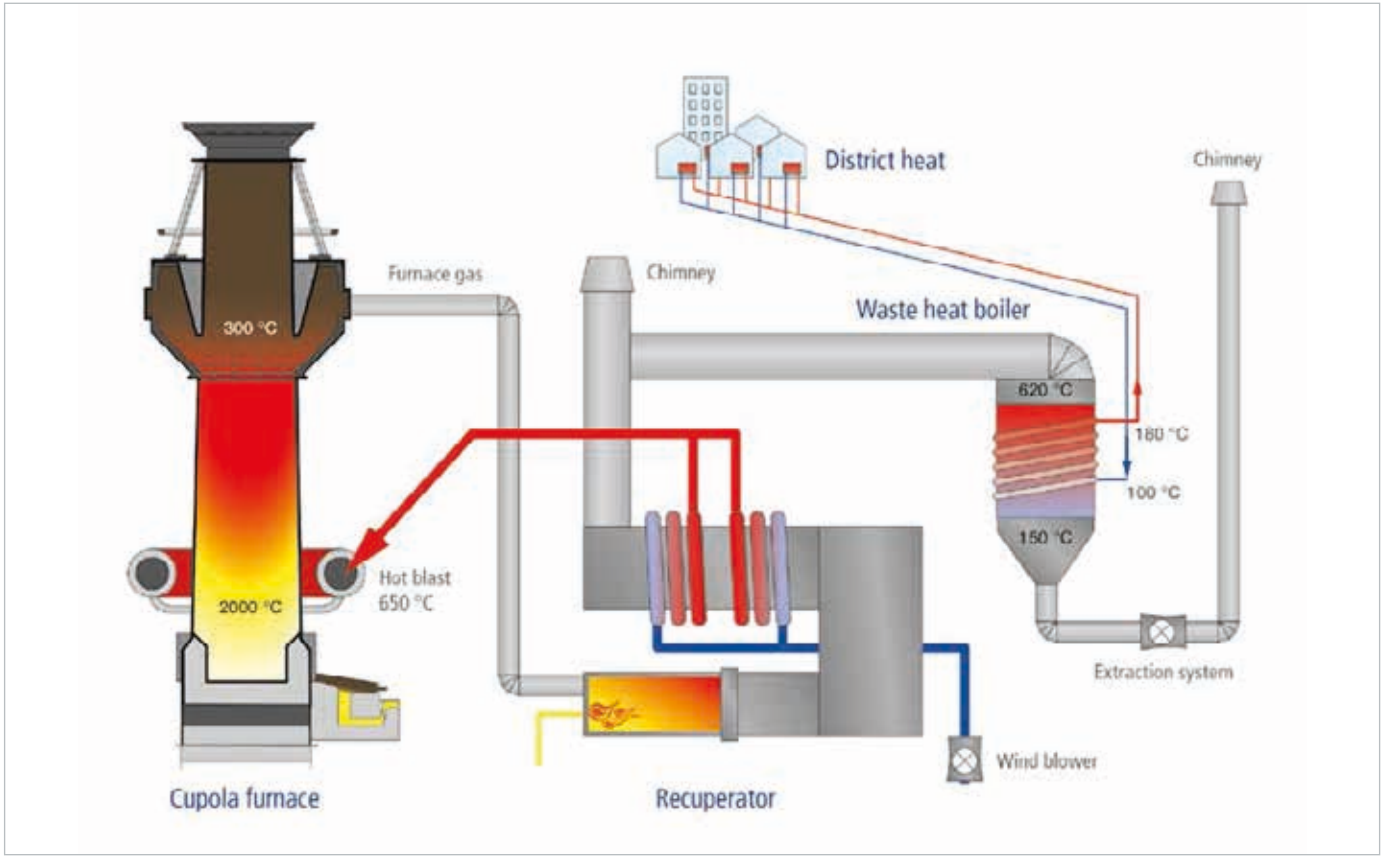
Ductile cast iron systems are produced in an **environmentally compatible** way, they guarantee trouble-free network operation and they are characterised by a **long working life**. Ductile cast iron is a material which can be used in many areas of pipeline technology and, because of its **superior technical properties**, offers long-term security and cost advantages.

Resource-friendly production process and materials recycling

The considerate handling of resources is increasingly moving into focus when it comes to economic and ecological processes. The **recycling economy** makes a considerable contribution to this. By **substituting primary raw materials**, environmental pollution is reduced. The Closed Substance Cycle Waste Management Act prioritises **waste prevention and reuse** over recycling.

Reducing consumption of fossil resources and fuels

The manufacturers of cast iron pipe systems have been early in starting to handle resources more efficiently and adjusting their manufacturing processes. In the factories of EADIPS FGR members, **no raw materials such as iron ore** are used for the production of pipes, fittings and valves. In modern cupola furnaces and in electrical induction furnaces, only steel scrap and cast iron scrap are reprocessed as secondary raw materials. Ductile iron pipes are almost **completely recyclable** and the cast iron produced in this way **does not suffer any loss in quality**.



Cupola furnace with recuperation burner and downstream heat exchanger

The ecological and economic sustainability criteria of cast iron pipe systems

Leaks in drinking water pipelines are responsible for the loss of the **resource of water** and defective sewers represent a potential hazard for groundwater. Ductile iron pipes with their **unique material properties** provide outstanding protection and are planned for a technical working life of up to 140 years. The low damage statistic means few repairs, is good for the rehabilitation budget and minimises interventions in inner-city street and traffic situations.

Because of the long **working life of cast iron pipe systems**, the replacement cycle is considerably longer as compared with other pipeline materials. This offers **economic and ecological advantages**. Reinvestment can be assessed as considerably lower and CO_2 emissions are thereby significantly reduced.

You can find comprehensive information on the subject as well as on products and applications in our specialist articles at eadips.org