# **Forging steel** since 1891.

We develop, produce and market sophisticated, customer-specific product solutions made of steel. Over 125 years of experience makes us experts when it comes to closed-die forging, heat treatment, metallurgy, welding processes, machining and manufacturing of



Forging methods:

- Closed-die forging
- Hot extrusion



**Process reliability:** 

- Simulation of the processes
- Automation
- In-process quality assurance

Advantages and properties of forged components: Optimised weight and increased fatigue strength.

#### Due to:

Defined grain structure, high ductility, high core density.

**Climate protection** is an important concern for us. **Our portfolio** includes a wide range of products that are being used in an increasing number of wind turbines.

Please get in touch for further information and our tailor-made solutions.



SIEPMANN-WERKE GmbH & Co. KG Emil-Siepmann-Str. 28 · 59581 Warstein, Germany Tel. +49 2902 762-01 · Fax +49 2902 762-632 info@siepmann.de · www.siepmann.de



Stahl-Armaturen PERSTA GmbH Mülheimer Str. 18 · 59581 Warstein, Germany Tel. +49 2902 762-02 · Fax +49 2902 767-03 info@persta.de · www.persta.com

## SD MACHINING

SD Machining GmbH Mülheimer Straße 18 · 59581 Warstein, Germany Tel. +49 2902 762-340 · Fax +49 2902 792-297 info@sd-machining.de · www.sd-machining.de









# Partner of the wind power industry

- Closed-die forging · Hot extrusion
- Heat treatment
- Machining
- Welding
- Manufacturing of components







# **Range of products for** the wind power industry





Drive shafts (extrusion)

185 - 285 mm

axb 200x200 - 400x630

30 - 600 kg

40 - 160 kg

Blocks

Spur wheels 320 - 860 mm 30 - 590 ka

**Planet carriers** 315 - 825 mm 30 - 890 ka





Flanged hollow wheels

245 - 800 mm 20 - 680 kg



### Planet wheel

- Ø 210 - 660 mm
- 33 800 kg



**Clutch Hubs** Ø

- 325 680 mm
- 37 410 kg

# Wind power industry range of services

#### Machining

#### Machinery specialised for:

Turning Milling (X/Y/Z)Machining centres

up to Ø 1.300 x 950 mm 1.050 mm / 510 mm / 510 mm up to Ø 920 x 1.800 mm

#### Materials engineering

#### Steel grades:

Carbon steels

Quenched and tempered steels / case-hardened steels

Austenitic steels

Ferritic / martensitic steels (stainless)

Duplex steels (stainless)

- +N (normalising)
- +FP
- +A (soft annealing)
- +AT (solution annealing)

### Heat treatment:

- +QT (hardening and tempering)

  - (isothermal annealing)

### DNV • GL Lloyd's Register DIN EN 15085-2 CL1 AD 2000-Merkblatt W0 DGRL 2014/68/EU

## KTA 3201.1 Abs. 3 u. KTA 3211.1 Abs. 3

American Bureau of Shipping

#### Testing methods

Our own laboratory offers destructive and non-destructive testing.

3D measurement

Approvals:

Bureau Veritas

X-axis: 1.200 mm Y-axis: 2.000 mm Z-axis: 1.000 mm

We are among the very few specialists in forged components for wind power industy. Our forte is the cost-effective production of small and medium-sized batches of exceptional quality.

#### Quality management

#### Certificates:

DIN EN ISO 9001:2015 DIN EN ISO 14001:2015 DIN EN ISO 50001:2018