

English

MASKINERING A-S

Company presentation Maskinering AS

Production of machine parts – Welded structures – Mechanical work Established 1974

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Date: 04.01.18





In addition we have ship and offshore clearance in all of our special fields, and are approved suppliers for Aker and Kværner.



Main fields of activity - our offers for you

- Production and repair of machine parts according to your specifications, drawings and preferences via turning, milling and drilling etc., applying both CNC-controlled and manually operated machines
- 3D-waterjet cutting on 5 axis waterjet cutting machine
- Mobile machining via turning, milling and line drilling on-site adaption and repair of wear related damages – Maskinering AS is a specialist in mobile machining.
- Welding of structures according to EN 1090, pipe systems and pressure vessels in accordance with pressure equipment directive PED (2014/68/EU), repair welding and welding of uncertified structures for non-critical applications and individuals
- Mechanical services, including hydraulics
- Pipe fitting
- Technical expert services in materials technology, qualification of welding procedure specifications (WPS/WPQR) and qualification of welders
- Heat treatment of small parts



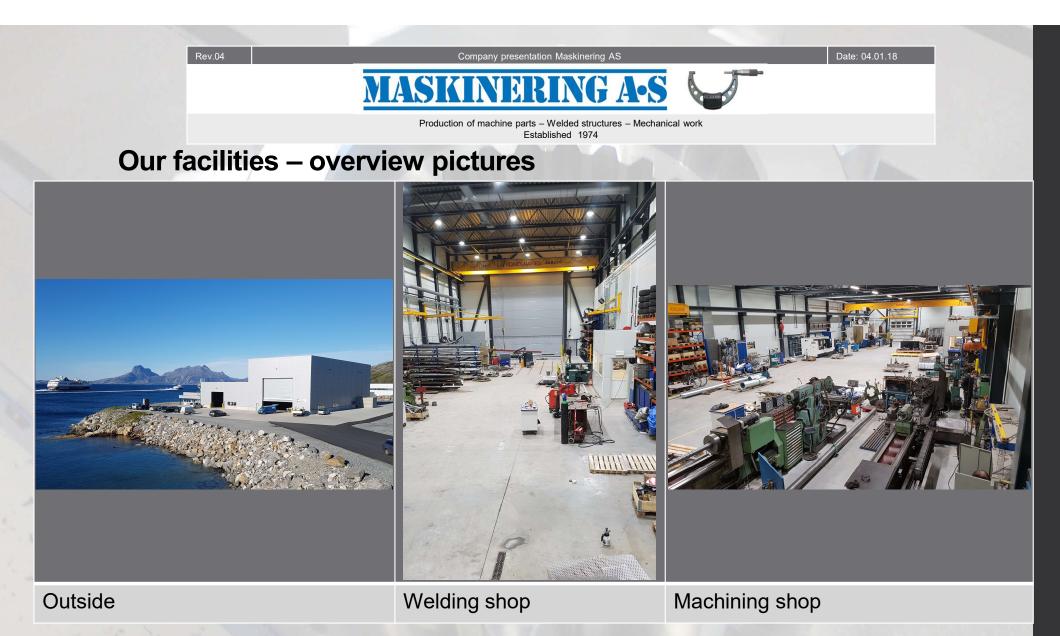


Our facilities

• Our facilities include a welding shop, a machining shop, administration building with 6 offices and a meeting room and 8500 m² of open-air ground.

Work shop	Length [m]	Width [m]	Height [m]	Portal size w × h [m]	Crane capacity [t]	Max. height beneath crane hook [m]	Work- place cranes (500 kg)
Welding shop	48	18	12	9 × 9	20 + 20	10	4
Machining shop	48	18	6	5 × 5	12,5	4,2	3

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Production equipment - stationary

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Type of equipment	Max. Work piece size [mm]	materials	Note
Turning	Ø1200 × 8000	All metallic materials and plastics	Both CNC-controlled and manually operated
Milling	3200 × 2000 × 1200	All metallic materials and plastics	Both CNC-controlled and manually operated; max. Weight capacity on table: 11000 kg
Waterjet cutting	4200 × 2600 × 300	All water-resistant materials	Max. pressure: 6500 bar, capable to cut section thicknesses from foil and up to 300 mm
Bending	4000 (width)	All materials suitable for plastic deformation	Max. pressing force: 3200 kN
Line drilling	Ø41 – 1700	All metallic materials and plastics	Larger diameters can be drilled with special equipment



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Production equipment – mobile and supporting equipment

Type of equipment	Max. Work piece size [mm]	Materials	Note
Hardening	970 × 290 × 290 (charging racks)	Materials suitable for heat treatment in normal atmosphere	Max. operation temperature: 1150 °C
Mobile machining	No size limits	All metallic materials and plastics	All equipment for mobile turning and milling is made by Maskinering AS

- In addition to the equipment named above, Maskinering AS has available welding machines for manual welding methods 111, 136/138 og 141, rollers, saws and a plasma cutting machine etc.
- For more information please have a look on the web site: www.maskineringas.no/OurMachinepark

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Technical expert services in materials and welding

- Maskinering AS has its own welding coordinator IWE, «comprehensive level», certified according to EN ISO 14731.
- The welding coordinator has long term experience in materials engineering and welding co-ordination in offshore-related industries.
- Thus Maskinering AS has the possibility to take jobs that involve requirements of accordance with NORSOK-standards M-001, M-101, M-102, M-120, M-121, M-601, M-630, M-650, (M-501) or DNV-OS-C101 and DNV-OS-F101.
- Maskinering AS has as well the possibility to perform tasks where accordance with pressure equipment directive PED (2014/68/EU) or EN 1090 is required.
- · We can offer you technical expert services in these fields as well.

HARDOX® WEARPARTS Center

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- In summer 2017 we were appointed HARDOX® partner
- For you, as our costumer, this means that you get a partner who:
 - Is acknowledged supplier for SSAB's HARDOX® products
 - Has experience and competence with processing of HARDOX® products
 - Gets competence support from SSAB, if this is required
 - Has a certain assortment of HARDOX® products on store
 - Is preferred consumer for SSAB, that can supply you quickly with the products you need, in case we don't have them on store
- Please find an example on page 16

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Finished crankshaft



Finished gear wheel





Examples from former projects – waterjet cutting

 Applying waterjet cutting it is only your phantasy that limits the possibilities, as can be seen in the picture below. This object was cut out on our waterjet cutting machine. With ongoing and upcoming projects we will get further references soon.



Demonstration of possibilities when applying waterjet cutting

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Examples from former projects – repairwelding

- Task:
- Weld dimensions:

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- Material:
- Go back to page 12?

Weld and install wear plates on wheel loader bucket

Weld length: >2.5 m; section thickness: 30 mm

Hardox® 450 (QT steel)



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Finished bucket with welded wear plates

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Examples from former projects – turning on-site

• Task:

Turning of raceways and support rolls for cement furnaces

• Dimension raceways: Ø 6800 mm

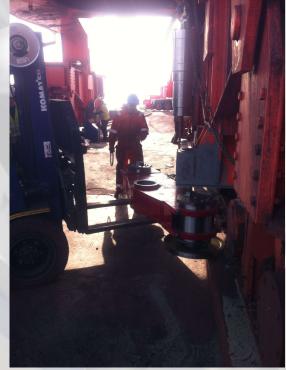


One can see the raceways in the upper left corner and in the center of the picture.



Task:

Disassembly, line drilling and assembly of new boogies for ship loader (for loading of ore)





Disassembly of boogies

Ship loader in full size

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Examples from former projects – further projects

- For further exemples from former projects you are welcome to have a look on our websites:
- Machining:
- Mobile machining:

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- Welding:
- Mechanical works:

- www.maskineringas.no/machining
- www.maskineringas.no/Onsitemachining
- www.maskineringas.no/Welding
- www.maskineringas.no/Mechanical



Ending

- If you have any project where we can contribute with our competence and our equipment, you are welcome to contact CEO Kjell-Ivar Ysland. Please find contact information on page 3 (click here for forwarding) of this presentation.
- Of course you are also welcome to visit us at our facilities for a guidance and a discussion. Please contact CEO Kjell-Ivar Ysland for this.
- We are looking forward to hear from you.