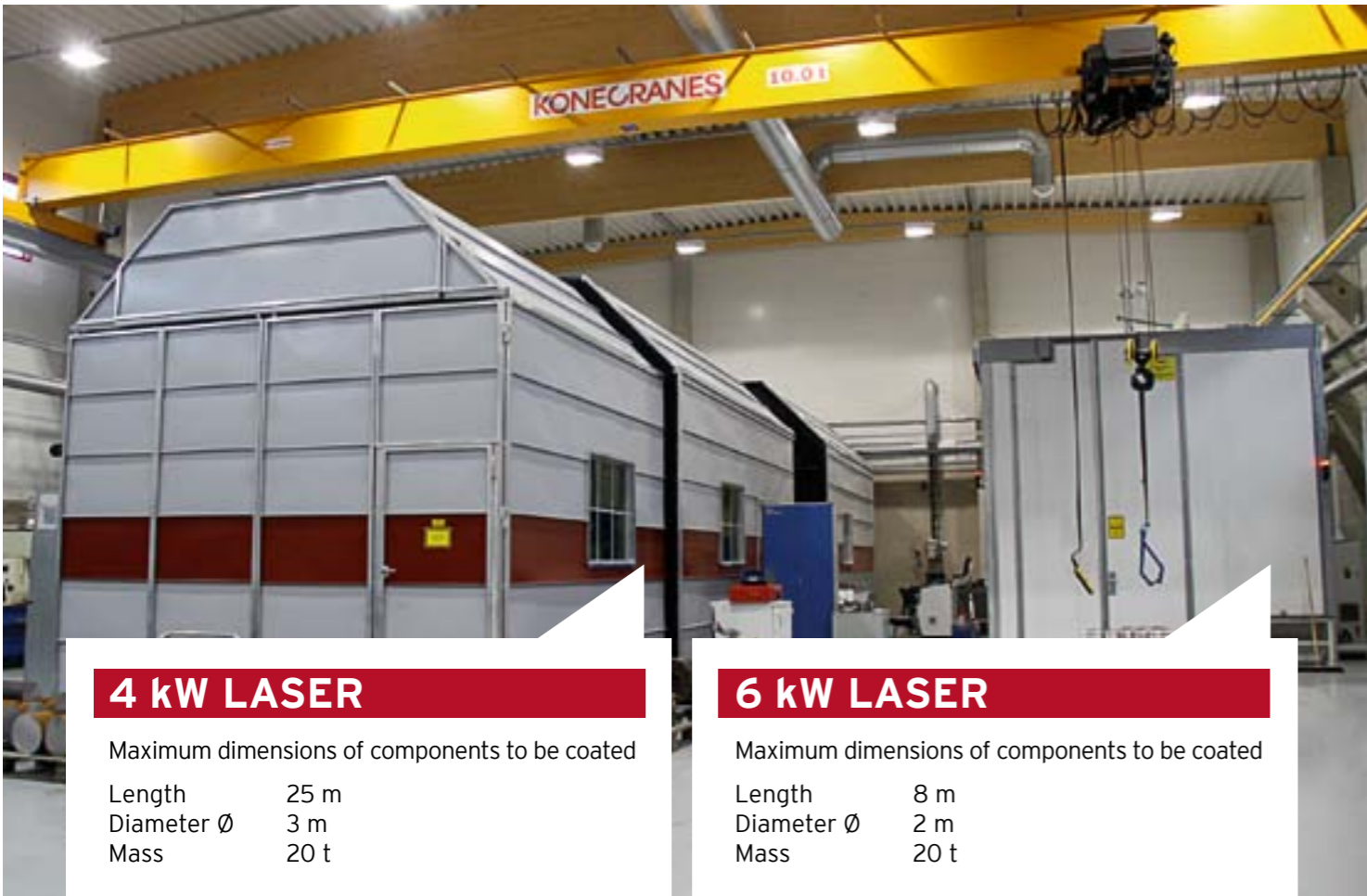




**SUPERB
COATINGS
WITH LASER**



LCC
Laser Coating Centre



4 kW LASER

Maximum dimensions of components to be coated

Length 25 m
Diameter Ø 3 m
Mass 20 t

6 kW LASER

Maximum dimensions of components to be coated

Length 8 m
Diameter Ø 2 m
Mass 20 t

INSIDE TUBE COATING

Max. length 2000 mm, min. Ø 70

- Fast and flexible deliveries since year 2001
- Metal to metal coatings
- Metallurgical bond between coating and base material
- ISO 9001 and 14001, Process certification by GL and LR
- Machining services
- Hardening with laser
- Process controlled by pyrometer
- Laser specialist consultation services

Kokkola LCC Oy

Kokkola LCC Ltd (LCC) offers laser coating-, expertise- and machining services. The main customer areas are in machine building, metal, energy generation and process industry.

Laser coating is well suitable for new production and maintenance purposes. Laser coating technology will open more competitive possibilities in design and production.

A highly skilful personnel combined with modern equipment will guarantee high quality standards and production efficiency.

Benefits of laser coating

A component's raw material and manufacturing costs can be significantly lowered by choosing optimal materials.

The quality characteristics of laser coating are usually superb compared with other coating methods.

Examples of achieved cost savings:

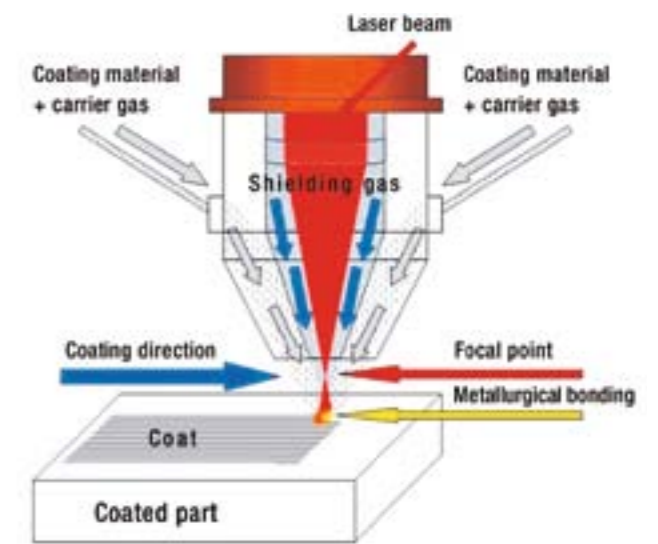
- Chance to use lower-priced base material
- Optimization of noble coating materials
- Increased reliability
- Product's longer operating life
- Decreasing of capital invested in spare parts

PRINCIPLE OF LASER COATING

Laser coating is an advanced industrial coating technology which can be used to improve the corrosion, wear and high temperature properties of various components and equipment.

During the laser coating process, the coating powder is melted on the surface of the work piece to be treated. The energy needed is supplied by a laser beam. During the process, a small and controlled amount of base material is melted resulting high strength metallurgical bonding.

The characteristics of laser coating are a completely dense and solid structure and small dilution between the base material and coating substance. The material properties of the coating are similar to those of the corresponding wrought material. The resulting coating thicknesses are usually between 0,5 3,0 mm. The material changes caused by the heat load are minimal. Laser coating can be applied for most coating-base material combinations.



REFERENCES



Component production
Spare parts
Reconditioning of components



Steel industry
Process industry
Paper industry



Power plants
Machine building industry
Mining industry
Food industry



Offshore and onshore industries
Subsea industry
Defence industry



Kokkola LCC Oy
Ahjokuja 8, 67800 Kokkola, FINLAND
tel. +358 (0)44 262 6860, fax +358 (0)6 822 5600
lcc@lcc.fi, www.lcc.fi

Managing director
SEPPÖ HEISKANEN
+358 (0)44 262 6860
seppo.heiskanen@lcc.fi

Sales manager
VELI-MATTI KORPISALO
+358 (0)44 262 6867
veli-matti.korpisalo@lcc.fi

Production manager
ILKKA PIISPANEN
+358 (0)44 262 6861
ilkka.piispanen@lcc.fi

Chairman of the board
AHTI EKDAHL
+358 (0)400 958 868
ahti.ekdahl@lcc.fi



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COMPANY EFFECT