

PRODUCT SHEET

High Power Laser Welding

Optimise or grow your business with the state-of-the-art laser welding facility.



State-of-the-art facility

Lindø Welding Technology (LWT) is a state-of-the-art laser welding facility for testing and developing new production methods.

The combination of modern high-power laser equipment and a skilled, experienced staff within process and material science helps your company optimise the production.

Services at LWT

At LWT, we offer a wide range of services within high power laser technology to help you grow your business:

- Product and process development
- Manufacturing of full-scale prototypes
- Repair and re-manufacturing
- Large scale 3D Printing
- O-series production
- Knowledge transfer
- Batch production
- Unrivalled infrastructure for testing.

Unmatched possibilities

The flexibility key is two 16kW Disc-lasers with the option of coupling these into one fibre delivering up to 32 kW laser power.

The lasers can operate individually but depending of the specific application the process can be extended to a hybrid process allowing both wire and powder material feed.

This is one of the most versatile and powerful laser systems available for commercial use in the world, giving you a unique opportunity to test and develop new production methods.

Laser welding

Laser welding and laser hybrid welding are high quality welding methods. The main characteristic is repeatability and a low heat input compared to conventional welding methods.

The low heat input results in minimum deformation of the final product. The high laser power available on LWT will secure a large welding depth thereby possibility to weld thick section material with a minimum of weld passes securing high productivity.

Given the advantages laser technology excels as a superior method for surface repair and optimisation of new or existing damaged or worn out components.

The technology also permits 3D Printing/additive manufacturing which can lead to significantly lowered total cost when comparing to conventional production methods.

A competent partner

LWT is operated by FORCE Technology which have a strategic partnership with Lindø Offshore Renewables Center.

Both partners being extremely competent in their fields of knowledge.

FORCE Technology has an extensive knowledge in laser welding processes, add to this a specialised and experienced staff and you are guaranteed a qualified partner.

Other services

LWT is a part of the Lindoe Component and Structure Testing A/S which also offers:

- Mechanical Tests of Large Structures
- Climatic Testing of Large Structures.

Equipment

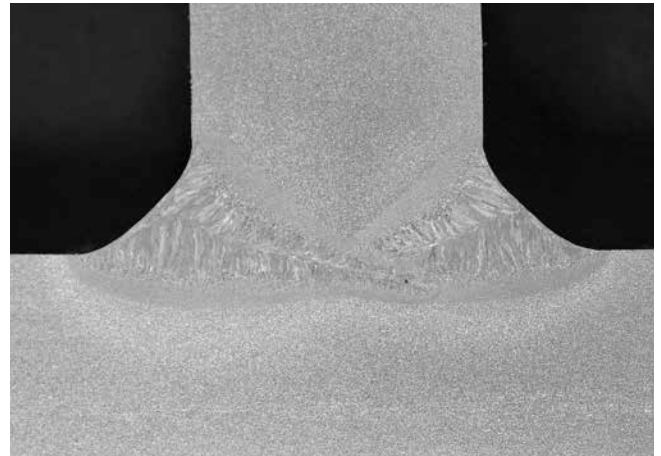
2 Disc-lasers:	32 kW (2x16kW)
2 Industrial robots:	70 kg each
Several turntables:	+ 1,000 kg in tilt mode
Lathe:	3 m long with option to extend, + 4,000 kg
Manipulator:	10-axis

Optics for laser welding and surface modification

Traditional arc welding equipment.



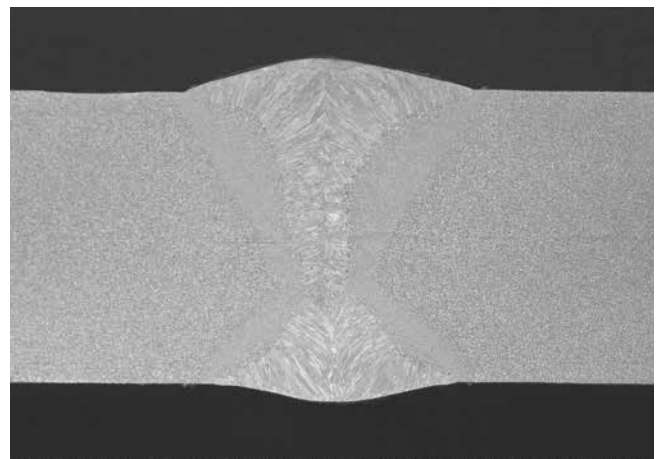
Remanufacturing of ID surface on high value steel component.



T-joint, 25 mm steel. Double sided laser hybrid welding.



Remanufacturing of pump wheel shaft.



Butt joint, 25 mm steel. Root GMAW, Top laser hybrid welding.



Contact
 Peter Tommy Nielsen
 Team Leader
 Innovation in Welding Technology
 ptn@force.dk
 +45 43 25 04 01



Contact
 Steen Erik Nielsen
 Project Manager
 Innovation in Welding Technology
 sen@force.dk
 +45 43 25 03 86