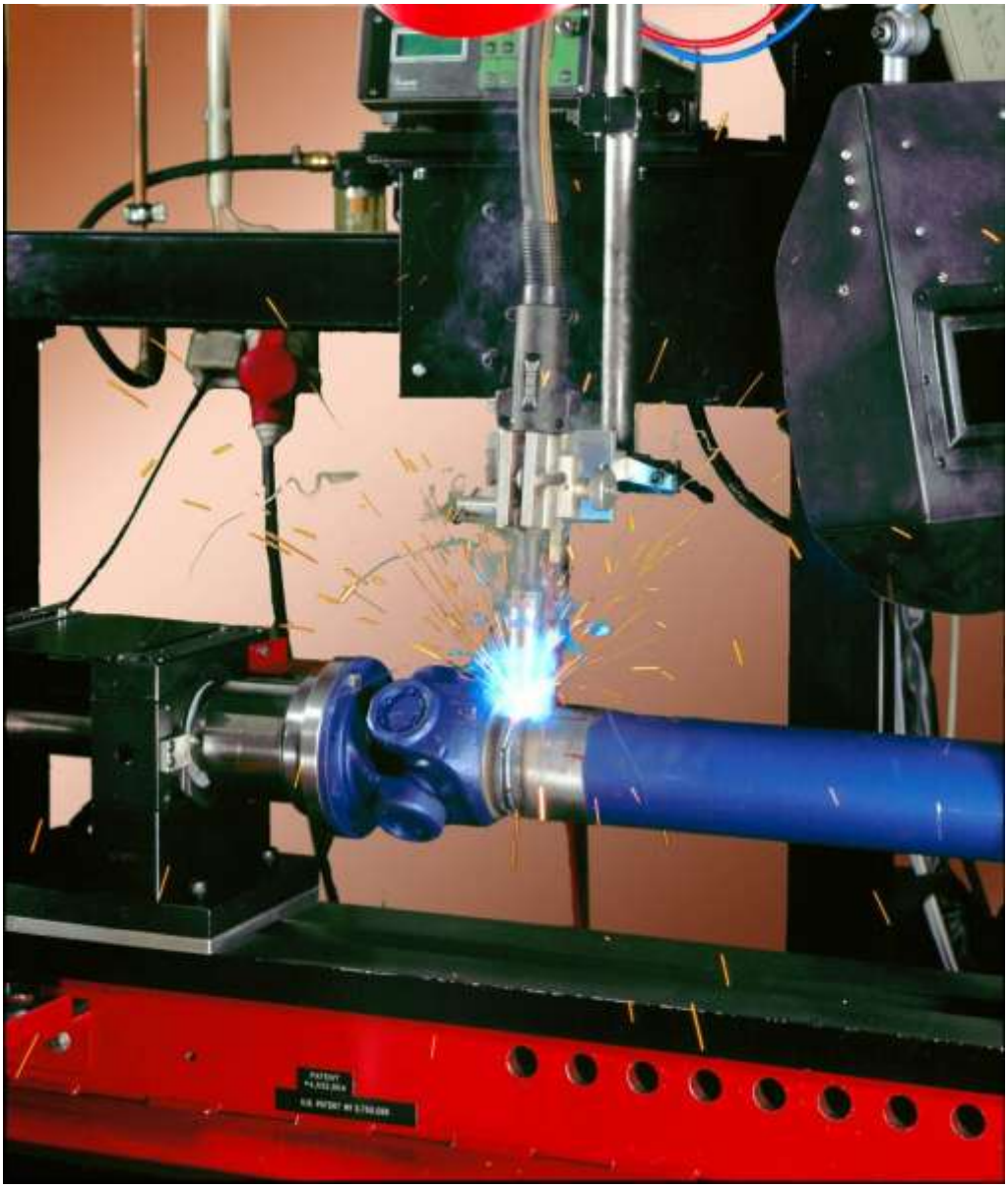
CSP Cardan Service Production
CSW Cardan Service Welder

The mobility package by WiCHMANN GmbH



Description of the CSP and CSW equipment

The new CSP and CSW constitute our „top of the line“ prop shaft service equipment. The efficient package of the CSW contains a machine to press and weld – and additionally for the CSP to balance - prop shafts as well as various accessory options. All this enables a professional manufacture of a prop shaft in the smallest space. With the CSP equipment it is possible to do all processes on one single machine and with one installation. This reduces the additional time and the profitability will be increased. By one single movement, i. e., by turn of the patented “Dyna Lock Bearing”, the CSP-machine can be turned into a balancing machine of high precision. By the high flexibility of the connecting system not only DIN, SAE or Mechanics prop shafts and prop shaft assemblies can be produced but also a wide international spectrum of prop shafts for passenger cars and pick-ups.

Pressing of components on the CSW- and CSP-machine

The first step is to press the pre-assembled prop shaft on an equipment via a 10 ton press. A foot switch enables a precise control of this process. Height-adjustable supports are available in order to enable an effective handling of the prop shaft.

Round seam welding of prop shafts on the CSW- and CSP- machine

For precision welding the CSP- and the CSW- machine are fitted with a universal control for the automatic welding. The control supported by an SPS is configured by an extremely user-friendly software programme. Besides the usual elements necessary for the welding process as e. g. material, shielding gas, additional material and the respective parameters like welding tension, wire feed, etc. the welding control governs the welding sequence plan with the corresponding welding speed. The process is directly controlled and consequently the different parameters within a welding are clearly determined. The welding control is responsible for all those tasks like tacking, welding, multiple passes and lap joints.

Balancing on the CSP- machine

The computer-based measuring technology to balance the prop shafts constitutes the central stone of the CSP-equipment. The modern imbalance technology with an efficient micro-controller and micro-processor enables a simple and clear handling even for non-qualified users. The use of an IBM- compatible PC guarantees a service without any problems as well as an economical technology. Apart from a high measuring precision already for short balancing periods a safe positioning of the place of imbalance can be realised by the driving aid. The measuring cycle runs automatically with a speed indicator and integrated speed control whereas the measuring period can be optimised with dependency on the necessary balancing precision. The tolerance comparison is effected without intervention and with reference to the balancing condition for the tolerances having been respectively selected.

Support of the prop shaft manufacture according to DIN ISO 9000

Welding control for the CSW- and CSP- machine

The welding control can be customer-specifically configured by WiCHMANN GmbH. Thus all programmes and parameters relevant for the WiCHMANN-prop shaft programme are available. Parameters practically proved and confirmed by process testing enable a prompt putting into operation and – which is more decisive – a safe production. The optional welding parameters are permanently controlled and updated so that the user only has to make a minimised effort to control the production. It is quite possible to store back all parameters to the PC. All components like wire feed, source of power and Interface are completely digital controlled so that all parameters can be safely reproduced and transmitted. The recording possibilities fulfil the requirements of an efficient quality control.

- Documentation of all basic data and target parameter related to the respective prop shaft.
- Documentation of the actual parameter (graphic measurement recording) and of the status reports.
- Documentation of the error messages listed according to components, date and hour.

Balancing control for the CSP-machine

Pre-configured parameters are available also for the balancing area. There is thus only a rotor-specific calibration necessary. Possible error influences can consequently be eliminated. Balancing reports can be made out for the single processes meeting all requirements of documentation. PC- based special programmes are available in order to permanently control and optimise the production. So e.g. center value, standard deviation and variation coefficient can be calculated for every rotor. With the statistic menu Histogram abnormalities like e. g. an increasing number of imbalances can be immediately found out in order to make technological conclusions.

Technical description of the CSW- and CSP-machine

Cardan service welder

CSW4220/1B

prop shaft welding machine
max. span: 4220 mm
1 weld gun
computer-controlled inverter welding power source
required ground area: about 6 m x 2 m
max. swing diameter: 300 mm
max. tube diameter: 175 mm

Cardan service production

CSP4332/1B/3E

prop shaft welding/balancing combination
max. span: 4600 mm
1 weld gun, computer-controlled
computer-controlled inverter source of electricity
4-planes PC-measuring technique, “soft machine”
center bearing support
safety equipment
ground area: about 7 m x 2 m
max. swing diameter: 300 mm
max. permitted tube diameter: 175 mm
capacity: max. 3000 1/min for a max. tube of 144 mm

optional accessories: spot welding equipment, 2. weld gun, balancing and welding adapters

Prices as per current Wichmann-price lists
Delivery time: about 6-8 months from order

Technical alterations reserved. Edition: August 2000