



Safety & Efficiency



Research & Development
INLINE QUALITY ASSURANCE
LASER WELDING



POWER



EFFICIENCY



CONTROL



QUALITY

Product info LASER



HARMS+WENDE QST GmbH
QualitätsSicherungsTechnologien



POWER

EFFICIENCY

CONTROL

QUALITY



POWER

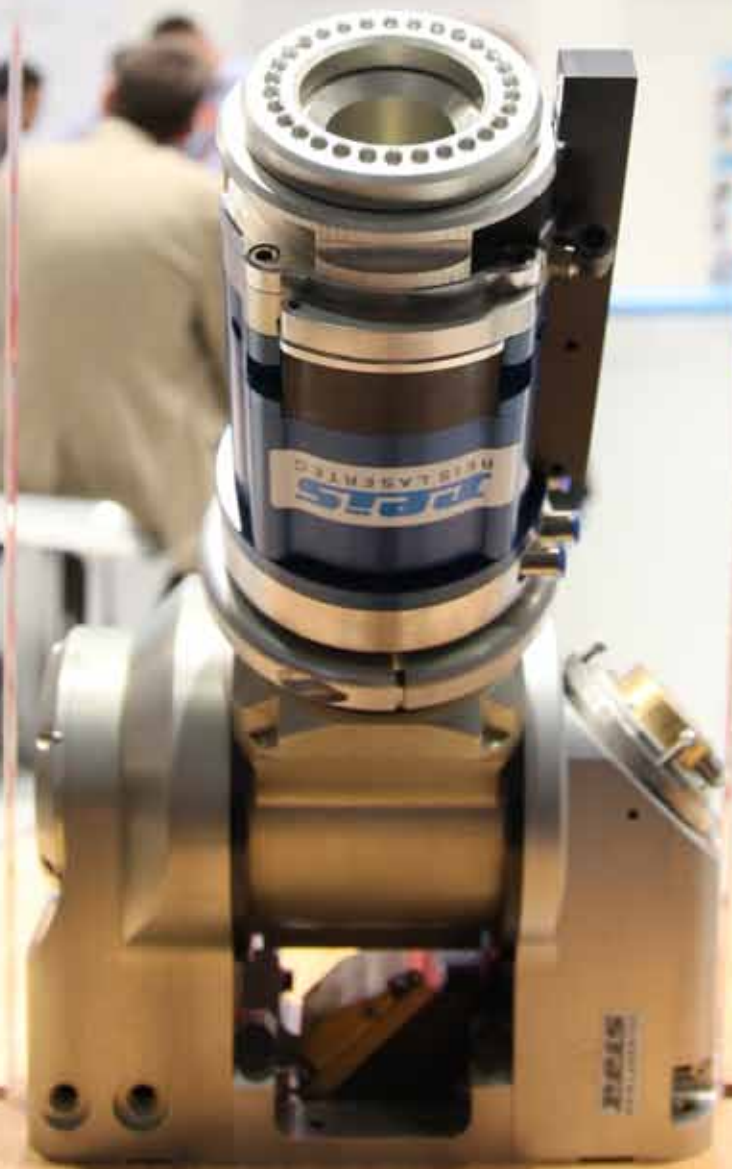
EFFICIENCY

CONTROL

QUALITY



RESEARCH



development

Research & Development

EXAMPLE IMAGES PQS MONITORING DURING LASER WELDING

Movement of the mean values and behavior of the measured values Troubleshooting

- Welding of circumferential welds for connecting nested tubes
- CO₂ - Laser
- 6kW maximum laser power
- 12 tack welds
- 12 seams with about 20-30s length



2

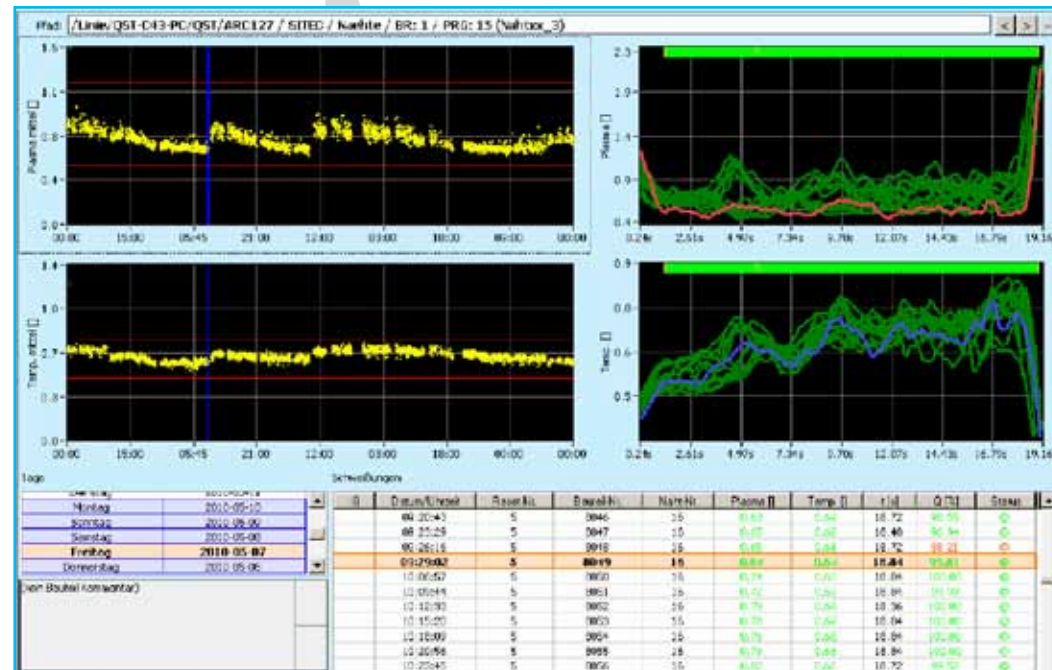
3





POWER | EFFICIENCY | CONTROL | QUALITY

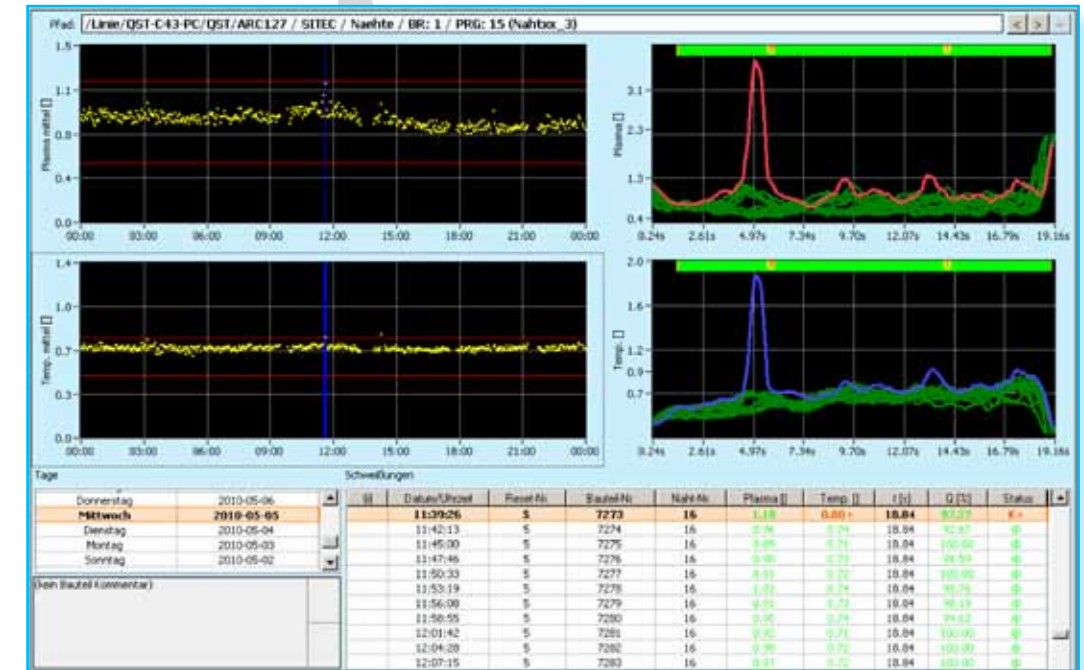
Drift of the mean values and abrupt change after maintenance work (5 days)



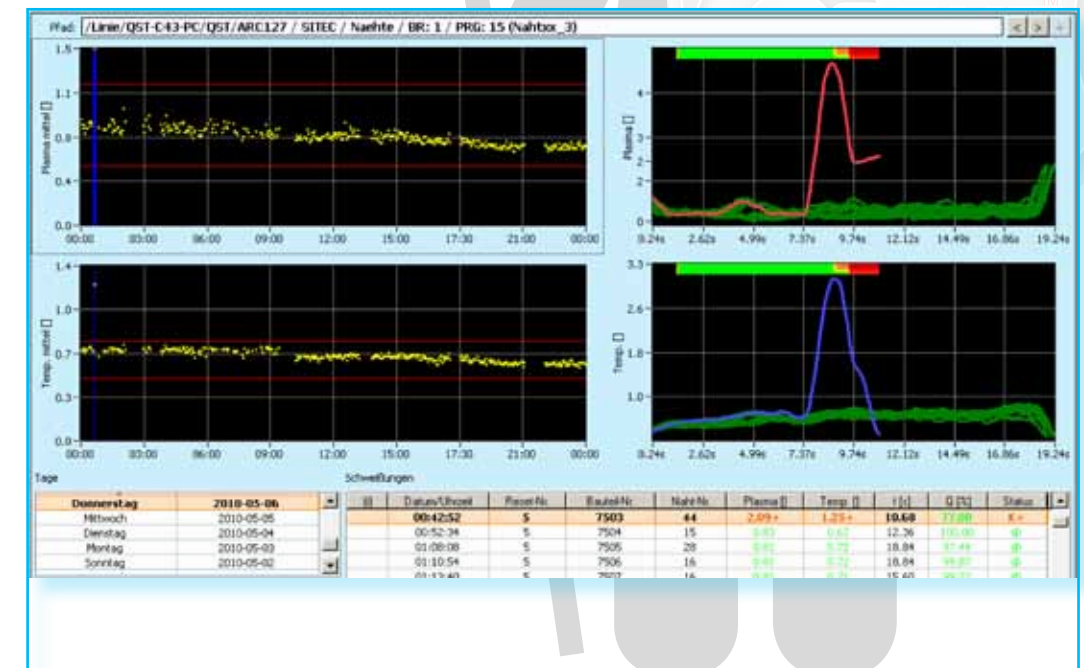
Gas interference by bruised inert gas pipe (Fault occurred in serial production)



probably selective weld defects



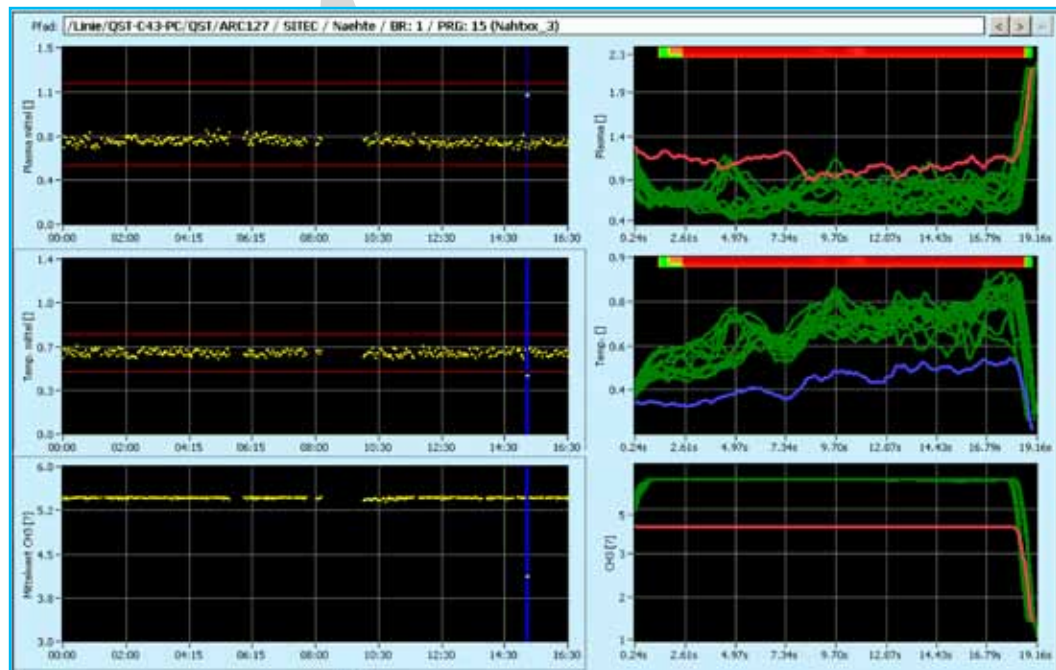
weld Stop





POWER | EFFICIENCY | CONTROL | QUALITY

Weld Stop attempt to interfere laser power (Ch3) with seam 3 of 93% reduced to 70%



Attempt to interfere sticker between the pipes with seam 6

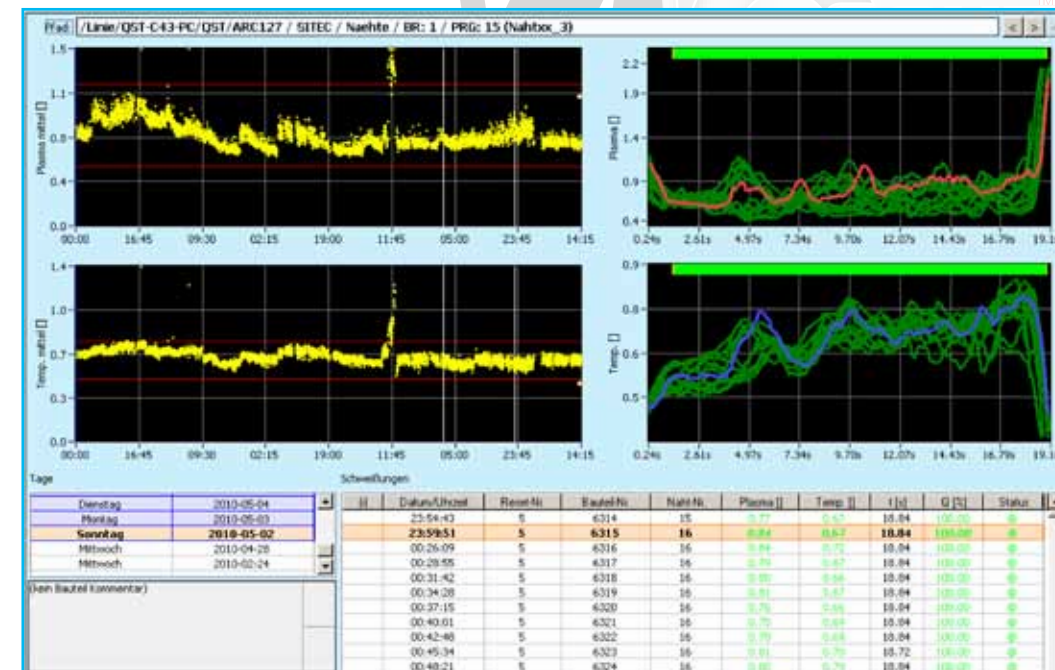


POWER | EFFICIENCY | CONTROL | QUALITY

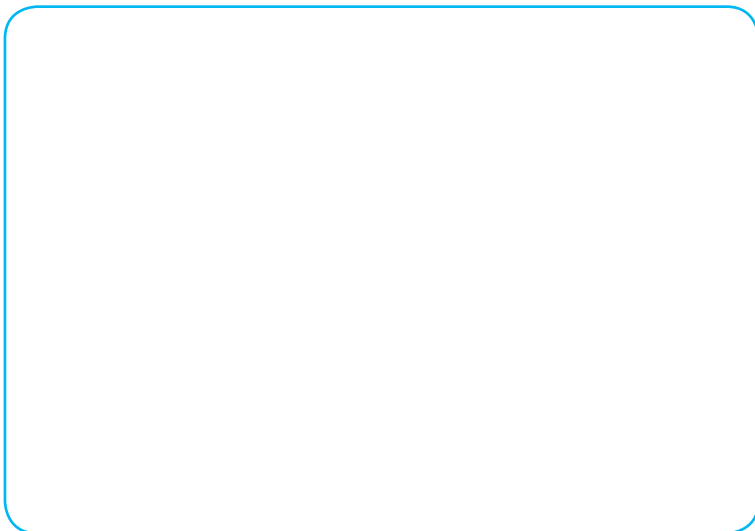
probably burn out at the end of the seam weld 6



Long time response (over 16 days) (gas interference can be seen as well)



Handed over by:



Disclaimer:

Calculations stated in this prospect, particularly information in the model calculations regarding investment and support costs are independent of local circumstances and a variety of individual factors, which for this reason are required to be individually ascertained for every single use case.

Should you be interested in a corresponding offer, please do not hesitate to contact your HWH QST system analyst.

We have done everything in our power the content of this publication being correct and updated on the day of printing. Within the scope of their policy for a steady improvement of the products, Harms & Wende QSTechnologien reserve the right to change the availability as well specifications of the products illustrated at any time. Partners of Harms+Wende QS-Technologien are informed about this by return. Kindly ask your Harms+Wende QS-Technologien partner for the latest information.

Due to the restrictions connected with the printing process there may be colour differences between the colours illustrated in this brochure and the actual ones.

All rights are reserved. Reprint or copy, even in parts, are subject to the prior written agreement of Harms+Wende QST GmbH.

Company Member of

HARMS+WENDE GROUP 

HARMS+WENDE QST GmbH
Qualitätssicherungstechnologien
BÜRO NORD | NORTH OFFICE
Am Berge 8 | D-21335 LÜNEBURG
Telefon | Phone: +49 (0)4131 223-1114
Fax | Fax: +49 (0)4131 223-1113

HARMS+WENDE QST GmbH
Qualitätssicherungstechnologien
HAUPTSITZ CHEMNITZ | MAIN HEADQUARTERS CHEMNITZ
GEWERBEGEBIET CHEMNITZPARK
Nordstraße 25 | D-09247 CHEMNITZ-RÖHRSDORF
Telefon | Phone: +49(0)3722-89081-0
Fax | Fax: +49(0)3722-89081-299

www.hwh-qst.de | info@hwh-qst.de