

EXPLOSIVE TUBE TO TUBESHEET WELDING

MAJOR PETROCHEM SITE - SOUTH AFRICA

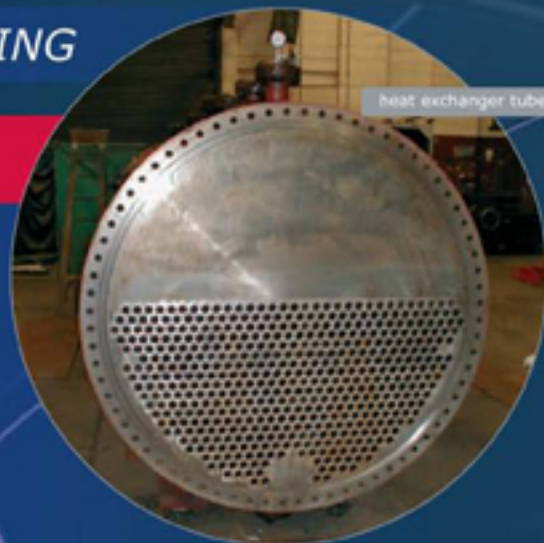
Recently TEI - Yimpact were awarded the contract to explosively weld the tubes into 2 Chlorine Liquifiers for one of the major petrochem sites in South Africa.

Having used this process on identical units in the past with tremendous success, the client was prepared to ship both newly built heat exchangers to Yimpact's UK workshops in order to take advantage of the benefits offered by explosively welding the tubes into the tubesheets.

Each heat exchanger contained 488 carbon steel tubes (25.4mm od x 2.64mm wall thickness x 7 metres long) and these were explosively welded into 132mm thick carbon steel tubesheets. The work was completed within the promised timescale and within the agreed budget.

Before being shipped back to South Africa, both vessels were subjected to a very searching shellside helium leak test which had been specified by the client and all the welds were confirmed to be leak tight.

Having experienced many years of trouble free service from the original heat exchangers which had explosively welded tube to tubesheet joints, the client is looking forward to a similar success story from his new heat exchangers.



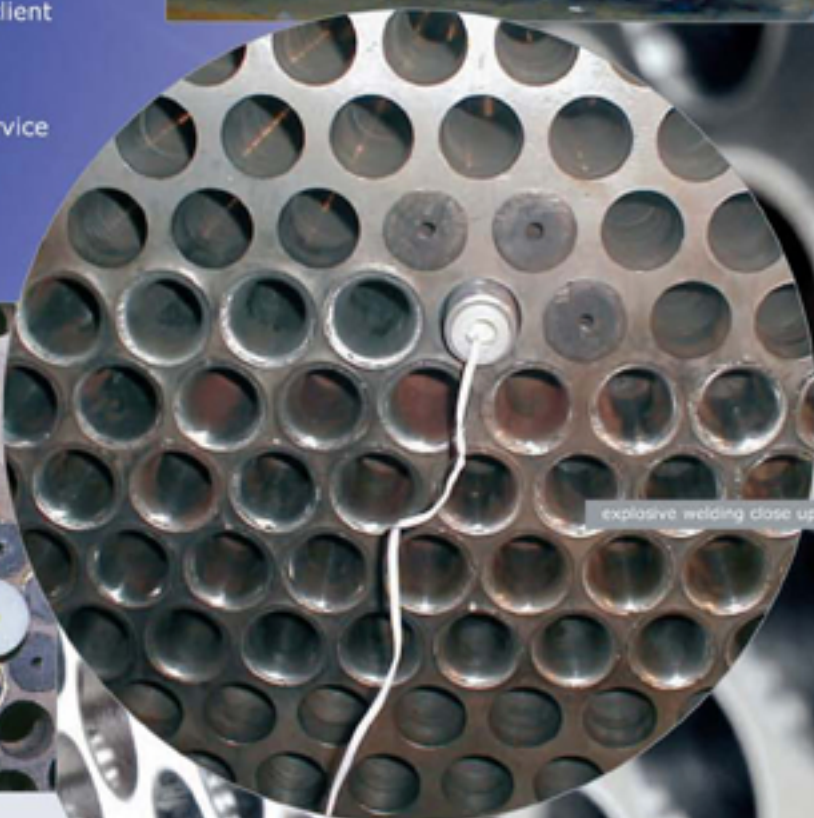
heat exchanger tube



heat exchanger tube side view



explosive welding configuration prior to detonation



explosive welding close up

EXPLOSIVE ENGINEERING

TEi Yimpact provide the following explosive engineering services for heat exchanger users & manufacturers.

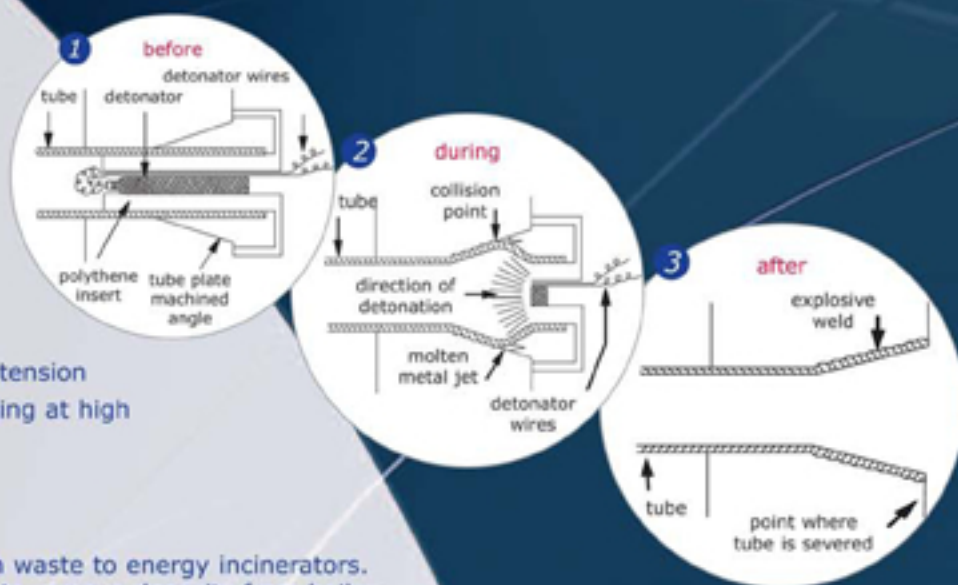
- Tube to tubesheet welding
- Tube plugging and tube expansion

Benefits include:

- Enhanced operational reliability
- High Joint Integrity and plantlife extension
- Leak tightness of equipment operating at high temperatures and pressures

Other Services include:

Online and offline explosive cleaning in waste to energy incinerators. Controlled explosive charges are used to remove deposits from boiler tubing in waste to energy units.



CONDENSER & HEAT EXCHANGER INSPECTION & REFURBISHMENT

TEi Yimpact tube inspection services include:

- Eddy current inspection
- IRIS ultrasonic inspection
- Dinsearch electromagnetic inspection
- Ultrasonic thickness measurement



Other Services Include:

De-tubing, re-tubing, pressure testing and general refurbishment. Exclusive licence agreement for the use of "Retubeco" condenser de-tubing equipment for removal and replacement of tubes in targeted outages with minimum "downtime".



internal bore cutting



tube end flaring



tube expanding

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