

FLANGE TOOL INNOVATION

CASE STUDIES: NON-STANDARD APPLICATIONS OF EQUALIZER TOOLS



#2.0: FLANGE ALIGNMENT EXTENDED REACH TOOL



FLANGE ALIGNMENT CASE STUDY 2.1 BACKGROUND

LOCATION:

CONFIDENTIAL
UK Onshore Refinery

OPERATOR:
CONFIDENTIAL

DISTRIBUTOR: CONFIDENTIAL





FLANGE ALIGNMENT CASE STUDY 2.2 **ENQUIRY**

ENQUIRY SOURCE:

Equalizer staff onsite at refinery during site visit

KNOWN ISSUES:

 Notorious flange-joint, disliked by operator due to difficulty in aligning





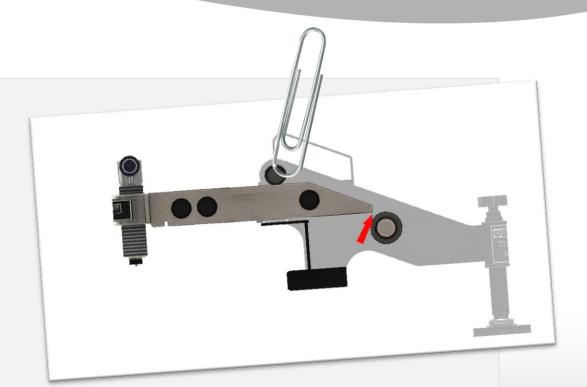
FLANGE ALIGNMENT CASE STUDY

2.3 **RESPONSE**

TOOL RECOMMENDATIONS:

based on flange size, standard Equalizer tools are too small

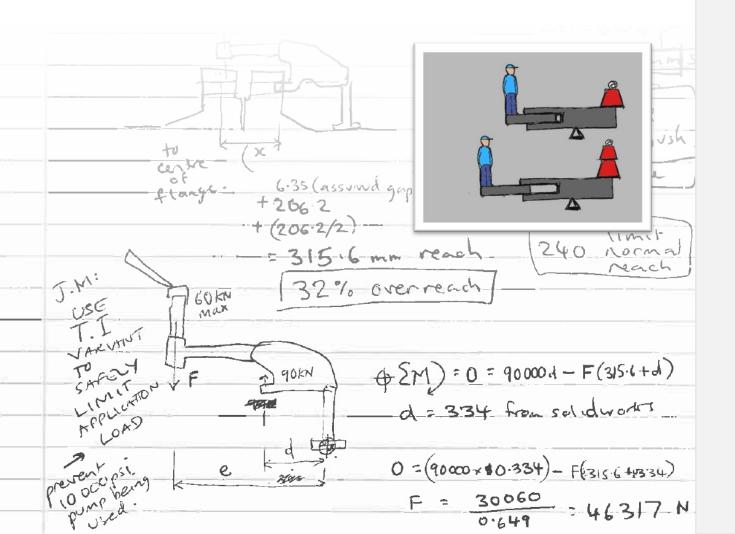
Equalizer **FA9TE** had insufficient wing-reach for this flange-joint.





FLANGE ALIGNMENT CASE STUDY

2.4 **DEVELOPMENT**



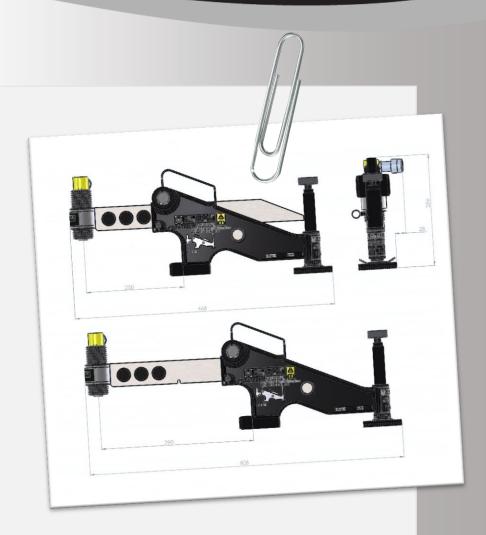
TECHNICAL ISSUE!

Tool modification required – calculations, development and testing required.



FLANGE ALIGNMENT CASE STUDY 2.5 PROPOSAL

- New Extended Reach Hydraulic Alignment tool proposed
- Down-rated hydraulics specified to prevent over-load - caused by increased torsional stresses due to longer wing





FLANGE ALIGNMENT CASE STUDY

2.6 **OFFERING**

- FA7TELW
 Long-Wing Hydraulic Flange Alignment Tool.
- Tool supplied within 10 days
- 90% of standard FA9TE components shared





FLANGE ALIGNMENT CASE STUDY 2.7 OUTCOME

 Tools delivered within promised time-scales

 Customer delighted with performance of tool.

