

Transfer faults

Transfer faults or the so-called “rotated heads” are a common problem when producing hexagonal parts on multi-station cold forming machines.

The parts tend to rotate during the transfer from one die to the next and will no longer match up with the hexagonal die pre-form. The corners of the hexagon are sheared off and remain as excess material on the external shape of the part.

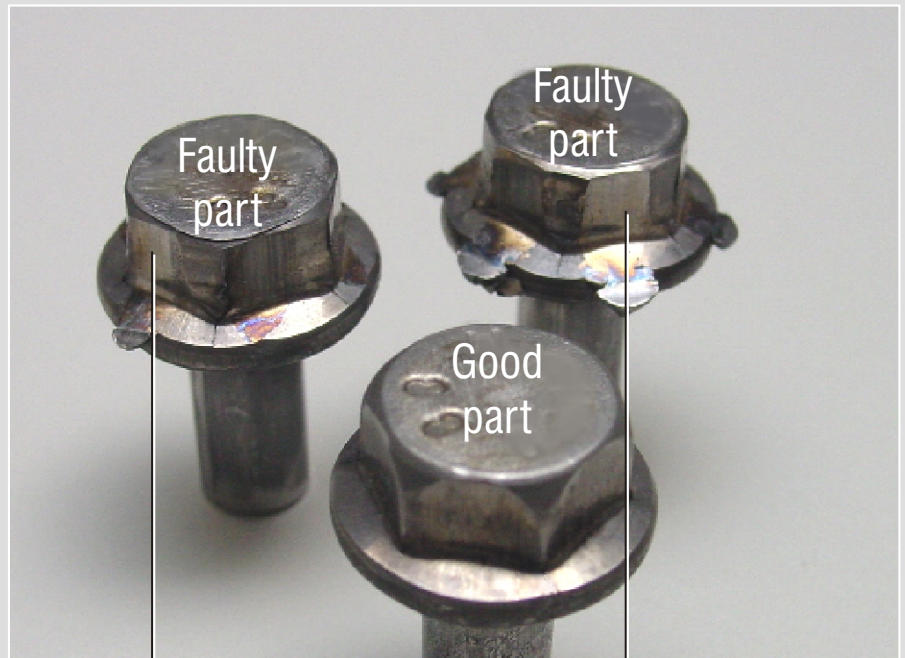
This error typically occurs randomly and is very difficult to find with manual inspections. Forming forces will not change significantly enough to be detected reliably with standard monitoring limits.

IMPAX/SK has developed a special algorithm which is capable of reliably detecting rotated heads using a separate ZOOM-channel.

This technology is available for our monitoring systems IMPAX/SK 2, IMPAX/SK 4, IMPAX/SK 7, and IMPAX/SK 100 and can also be retrofitted on select systems.

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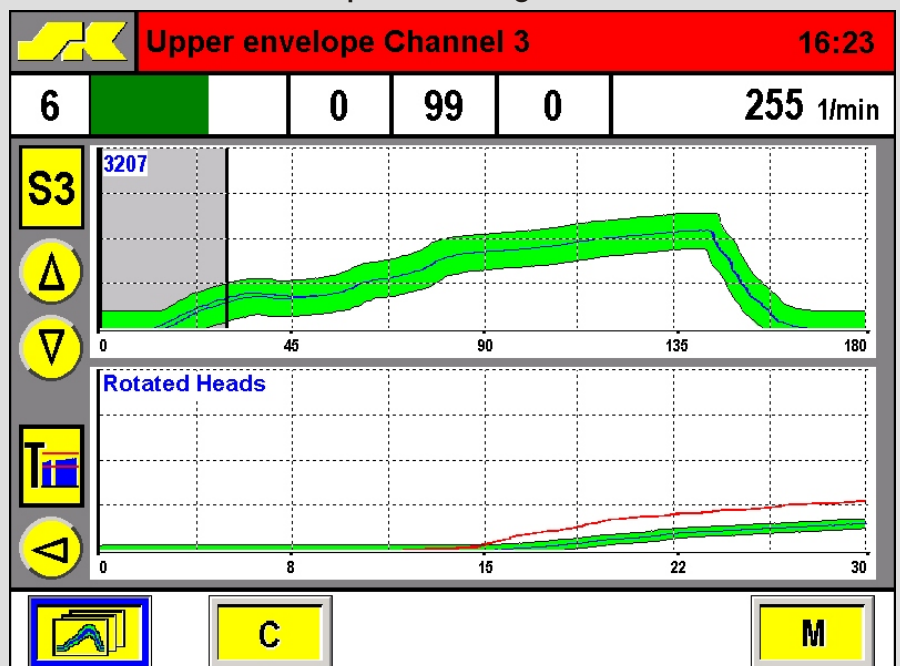
Hexagon Parts with “rotated heads”



Fault with partial rotation during transfer: partially trimmed corners

Fault with full 60° rotation during transfer: all corners sheared off

Detection of rotated parts using ZOOM



Excessive forces are detected easily by zooming into the process.