

HEAVY INDUSTRY ESTONIA OÜ

**ONE-STOP SHOP
FOR HEAVY
INDUSTRY NEEDS**

ON-SITE MACHINING SERVICES



- Portable circular milling machine
- Laser tracker
- Compact heavy drilling machine

Project nr. 14-1072
Customer: NOV
Date: Feb 2015
Pedestal machining

Scope of work

- Flange machining OD-ID
Ø4045 – Ø3640
- Flange thickness 105mm
- Thruholes 108 x Ø55
- Machining allowance 10mm

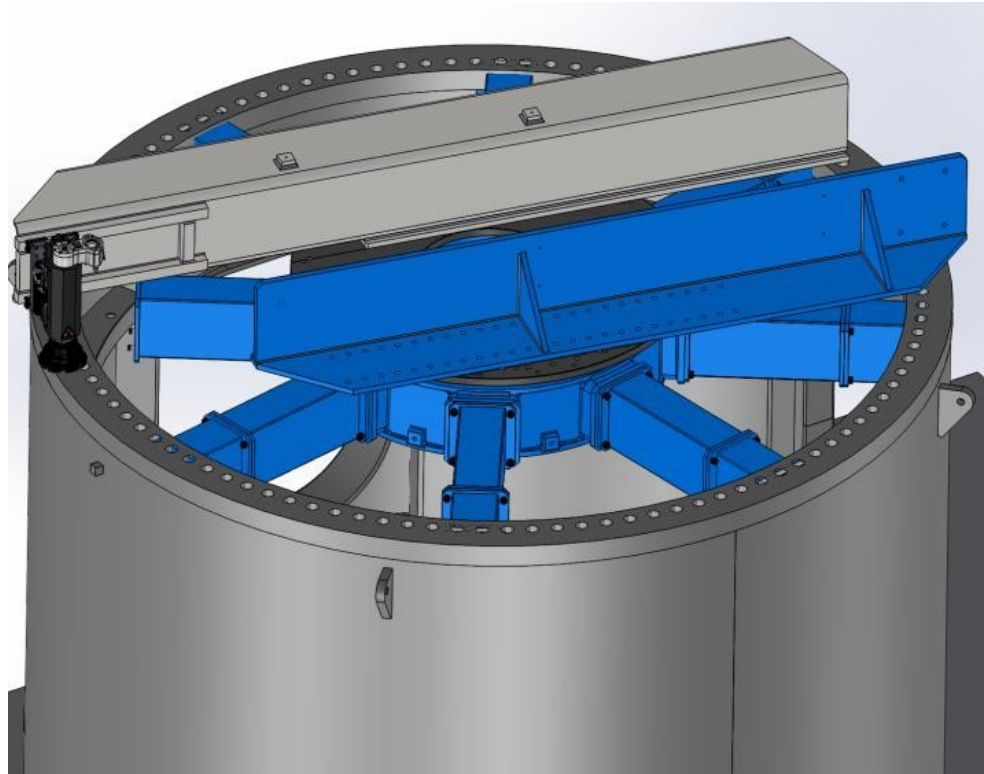
Requirements for machining:

- Flange flatness after machining -
max 0,2mm
- Ra 6,3
- Holes positioning deviation from the
center of the flange - max 1,0 mm

Result:

- Flatness after machining 0,11mm
- Ra 3,1
- Holes positioning deviation after
drilling – max 0,5mm

References:



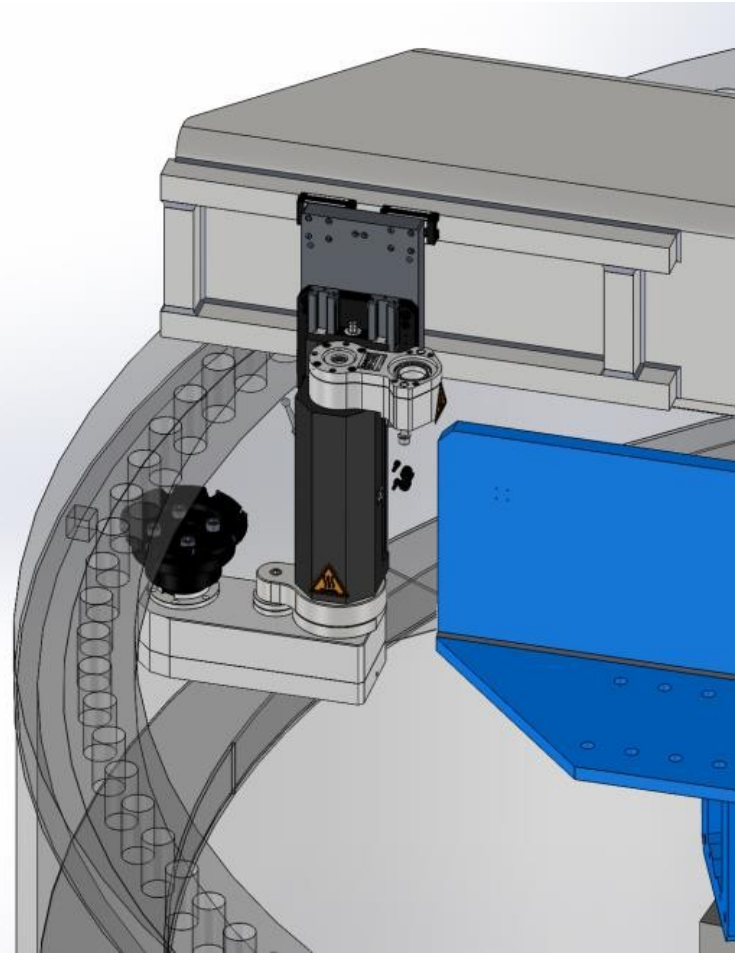
Pedestal rough machining



Pedestal final machining



Pedestal backside machining



Pedestal holes marking



Pedestal holes drilling



Project nr. 15-1033

Customer: NOV

Date: Jul2015

Bottom flange machining

Scope of work

- Flange machining OD-ID
Ø4926 - Ø4080
- Flange thickness 105mm
- Machining allowance 10mm

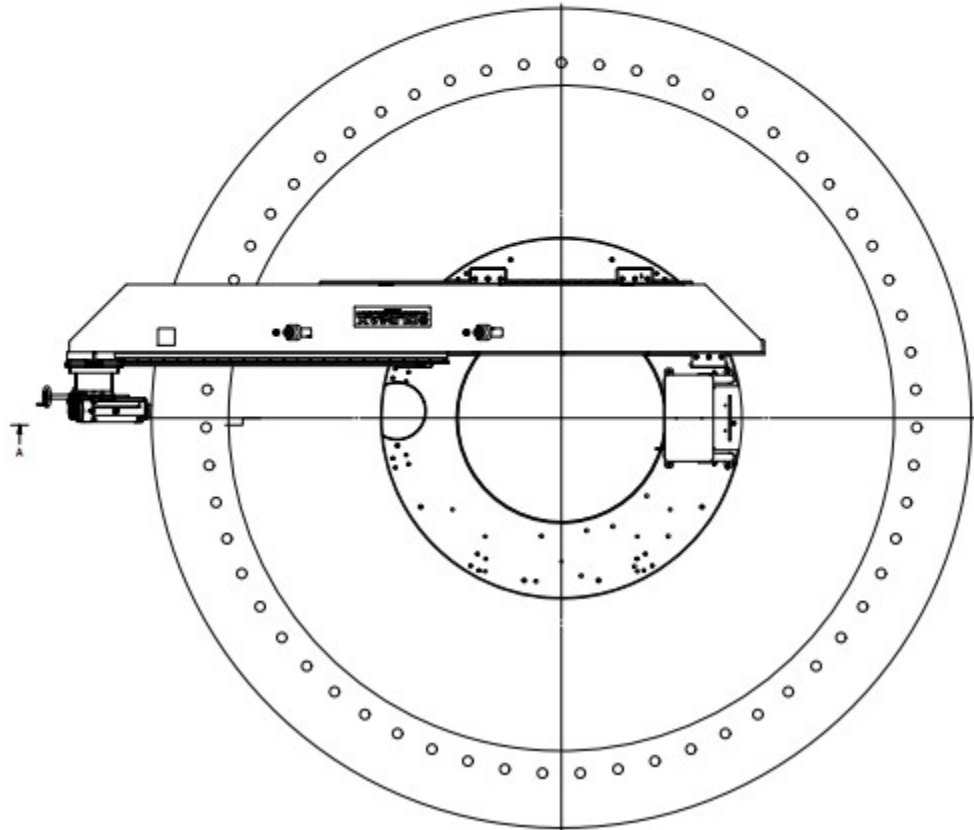
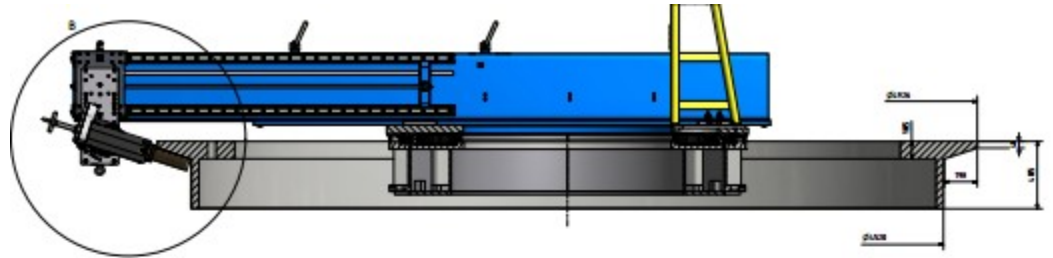
Requirements for machining:

- Flange flatness after machining -
max 0,5mm
- Ra6,3

Result:

- Flatness after machining 0,2mm
- Ra2,9

References:



Flange rough machining



Flange final machining



Flange after machining



Project nr. 15-1069,15-1072
Customer: ANDRITZ OY Date:
Jun 2016
Column flanges machining

Scope of work

- Upper and bottom flange machining OD-ID $\text{\O}3490 - \text{\O}3000$
- Outside $\text{\O}3490$ machining
- Flange thickness 110mm and 55mm
- Machining allowance 10mm

Requirements for machining:

- Flange flatness after machining - max 0,4mm
- Ra 12,5

Result:

- Upper flange flatness after machining 0,32mm
- Bottom flange flatness after machining 0,28mm
- Ra 6,3

References:



Upper flange machining on 5 m height



Bottom flange after machining



Project nr. 16-1090

Customer: Baltic Workboats

Date: Nov 2016

Azipod machining

Scope of work

- Azipod flanges machining OD-ID
Ø3220 – Ø2860
- O-ring groove machining
- Thread holes M24 x 48pcs
- Machining allowance 10mm

Requirements for machining:

- Flange flatness after machining -
max 1,0 mm
- Ra 6,3

Result:

- Flange flatness after machining
0,25mm
- Ra 3,2

References:



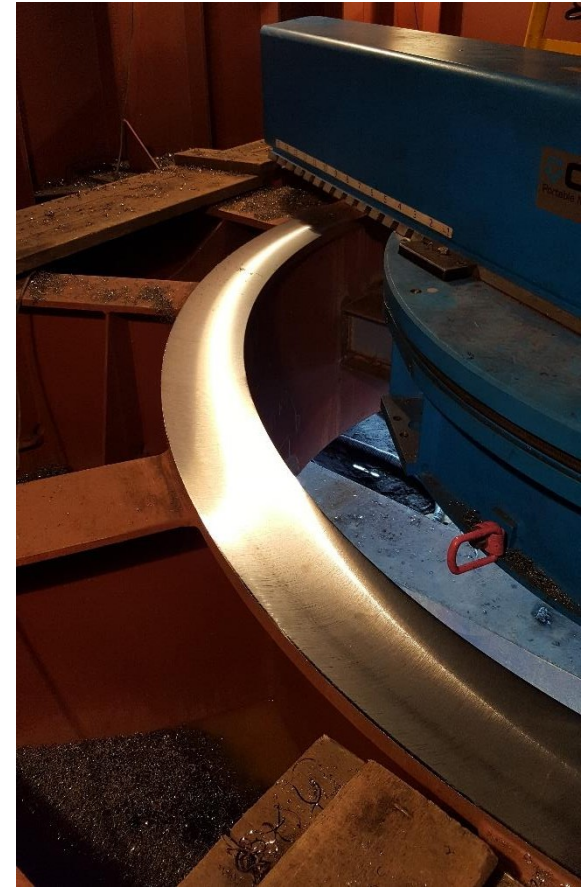
Jigs for machine setup



Azipod flange rough machining



Azipod flange final machining



O-ring groove machining



Thruholes marking and drilling



Azipod flange after machining



**Project nr. 13-1049 Customer:
MacGregor Norway Date: Mai
2013
A-frame in-line boring**

Scope of work

- Facing of frame cheeks
- Line boring of frame axis in top beam assembly
- Machining diameter is $\text{Ø}150\text{mm}$
- Machining allowance 5mm

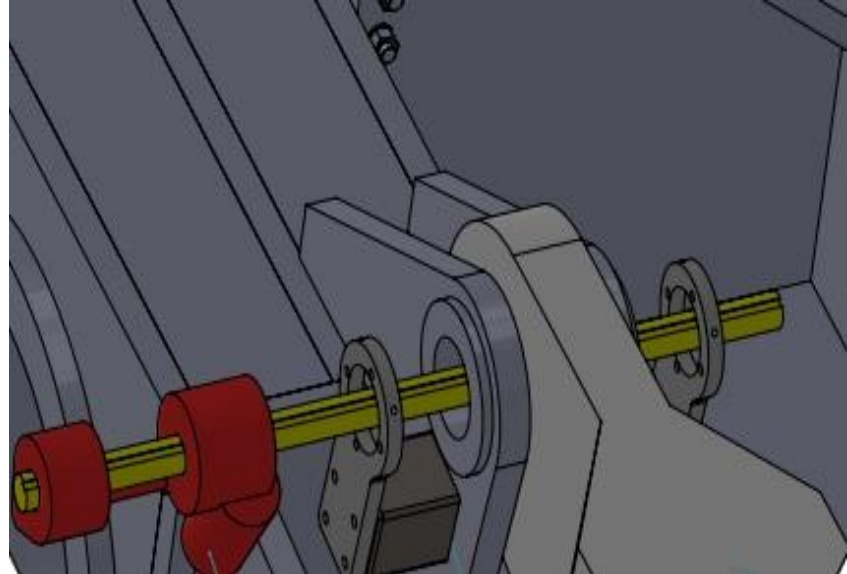
Requirements for machining:

- Ra6,3
- Alignment of the holes and axis

Result:

- Ra3,2
- Machined axis and holes are aligned

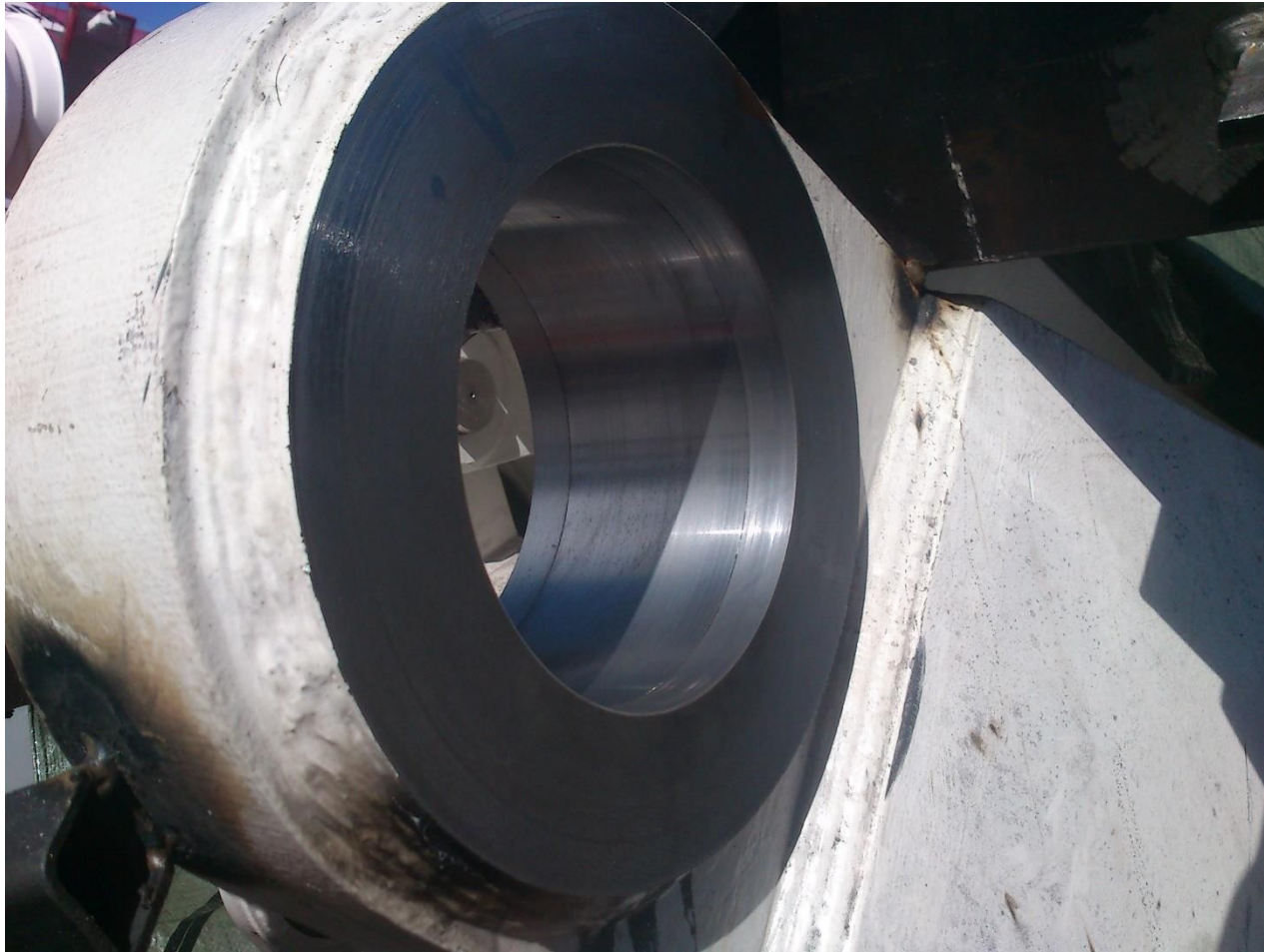
References:



Facing of frame cheeks



Line boring of frame axis in top beam assembly



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