

Ohmura Technical Report

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Machining of medium size castings

We are manufacturing housing- and case-type castings with high precision.
2 + 3 type of 5 axis manufacturing? Leave that to Ohmura Manufacturing!

Operators in action!



The difficulties of material

- 0.1mm material tolerance
- 0.01mm manufacturing tolerance
- the internal residual stress is unrevealed until cutting
- the internal defect appears only after cutting
- ascertain the adjustment of the deviation

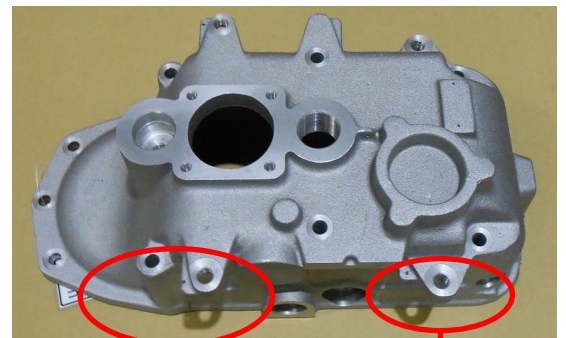


Big size drawings

- There are many dimensional requirements
- There are many machining points
- More than 50 tools are used for 1 process
- A lot of tools means lot of datum points
- Basically there is an inspection at every stage

What is so amazing?!

- to plan the process from complicated drawings
- it is difficult to determine the standards for the first process
- to design and manufacture complicated jigs
- fitting to the complicated shapes
- to clamp without deformation
- to make the jig which doesn't deform
- the manufacturing precision during every process



Ohmura Manufacturing Co., Ltd.

<http://www.ohmurasei.co.jp/>



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What is difficult??!

- to remain within the 0.001mm tolerance
- to adjust even 0.001 mm
- the screw is unexpectedly tough
- adjustment, modification
- prompt reaction
- troubleshooting
- and finally: courage



They are really amazing!



Conscientious hand-finishing

We use these machines:

5 Axis Horizontal Machining Centers

- YASDA YBN-80N 630x630
- YASDA YBN-800N 800x800
- MAKINO D-300 MAX ϕ 450



Horizontal Machining Centers

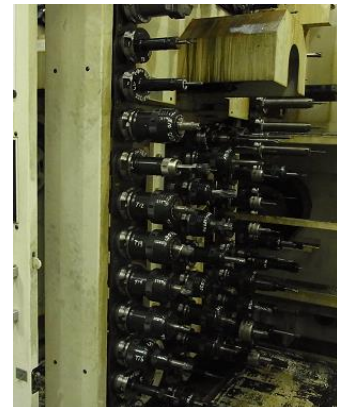
- YASDA YBN-600N 500x500 (2 machines)
- MORI SEIKI MH-65 630x630

Double-Column Machining Centers

- OKUMA 16A 2000x1600

Vertical Machining Centers

- MORI SEIKI MV-45 800x450
- MORI SEIKI MV-65 1200x650
- MAKINO MSA30-20 500x300



The topic of the next issue is 'Line-improvement #1'



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