

Cast Iron Machining - Improved Quality and Tool Life





Sovereign Secfine System on Makino a-81



• Component : Cylinder Block – Cast Iron

• Bore Dia: 72.015 mm

• Tolerance: 12 Microns

• Main Concern: Bore dia ovality (inconsistent)

Before Secondary Coolant filtration system										
Component no.	1	2	3	4	5	6	7	8	9	10
Co-ordinates	6,-5	3,-7	10,12	7,-9	4,5	9,4	5,-5	9,-7	10,-4	11,-5
Tolerance	11	10	2	16	1	5	10	16	14	16

After Secondary Coolant filtration system										
Component no.	1	2	3	4	5	6	7	8	9	10
Co-ordintes	-1,-4	-2,-5	0, -5	0,-3	-5,-7	0,-4	-1,-5	-3,-6	-2,-5	-2,-8
Tolerance	5	3	5	3	2	4	4	3	3	6





Tool life Improvement

Operation	Tool Life
Milling	15%
Drilling	25%
Tapping	15%
Boring	17%



Coolant clarity in the conveyor tank

Before



- Large amount of Metal fines
- Housekeeping not up to the mark

<u>After</u>



- Negligible Metal fines
- Good housekeeping

Benefits with Sovereign Secfine system



- Consistent high surface finish
- Elimination of fines in the machine working zone
- Superior house keeping
- Less labor cost
- Superior tool life
- Effective tramp oil removal
- Effective removal of bacterial and Fungus
- Higher machine up time
- Superior pump performance and operating life
- Enhanced coolant life
- Energy conservation
- Reduced 'carbon footprint' of the machine and component