



FEEDING/FILTRATION CASE STUDY NON FERROUS

Casting: VOLVO Subframe

KALMIN* S feeder sleeves, SIVEX* FC filters

Foundry:

Honsel GmbH & Co. KG
Meschede, Germany

Targets:

Lower internal scrap
Increased productivity
Better process consistency
Improved quality

Alloy:

Aluminium AlSi7Mg
LM 25

Casting weight:

23 kg (50 lbs)

Pouring temperature:

750 - 770°C (1380 - 1420°F)

Poured weight:

45 kg (100 lbs)

Cycle time:

Approx. 2 minutes

Moulding process:

Sandcasting,
GF High pressure moulding
machine

Pouring/filtration practice:

2 SIVEX FC Filters 50x75/10 ppi,
placed at bottom of downsprue.
4 KALMIN S blind feeders 4/95K,
2 KALMIN S blind feeders 3.5/5K
Feeder sleeves will be inserted into
the cavity created in the cope mould
by means of corresponding sleeve
pattern.

Requirements:

- Higher tensile strength
- Better ductility
- Porosity-free
- No shrinkage
- No gas porosity
- Excellent cosmetic appearance
after minimum finishing
- Dimensional consistency

Problems:

- Gas porosity
- Oxide inclusions
- Shrinkage porosity

Improvements:

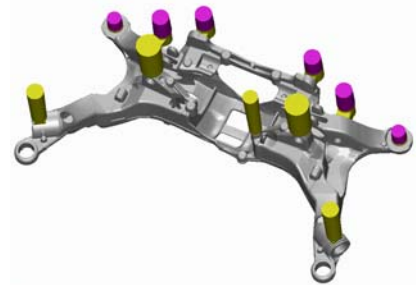
- Defect rate reduced by more
than 50%.
- More consistent mould filling.
- Directional solidification
encouraged.
- No shrinkage defects.
- Reduced finishing.
- Less sawing

FOSECO products used:

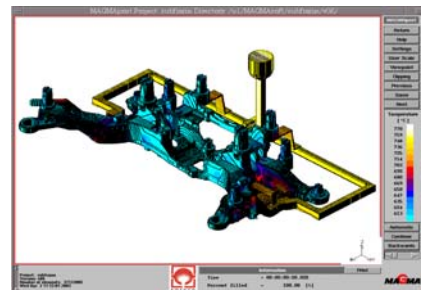
SIVEX FC Filters
KALMIN Sleeves

Key benefits

- Cleaner castings
- Reduced shrinkage
- Less scrap
- Increased productivity



Runner system with 2 SIVEX FC
filters; 6 KALMIN S blind feeders



Smoother filling pattern with lower
metal velocities created

