

Filial Brass



Fibre Technology Limited
Institute of Materials
4th November 2004

Melt Extraction

Scrap
&
Alloys

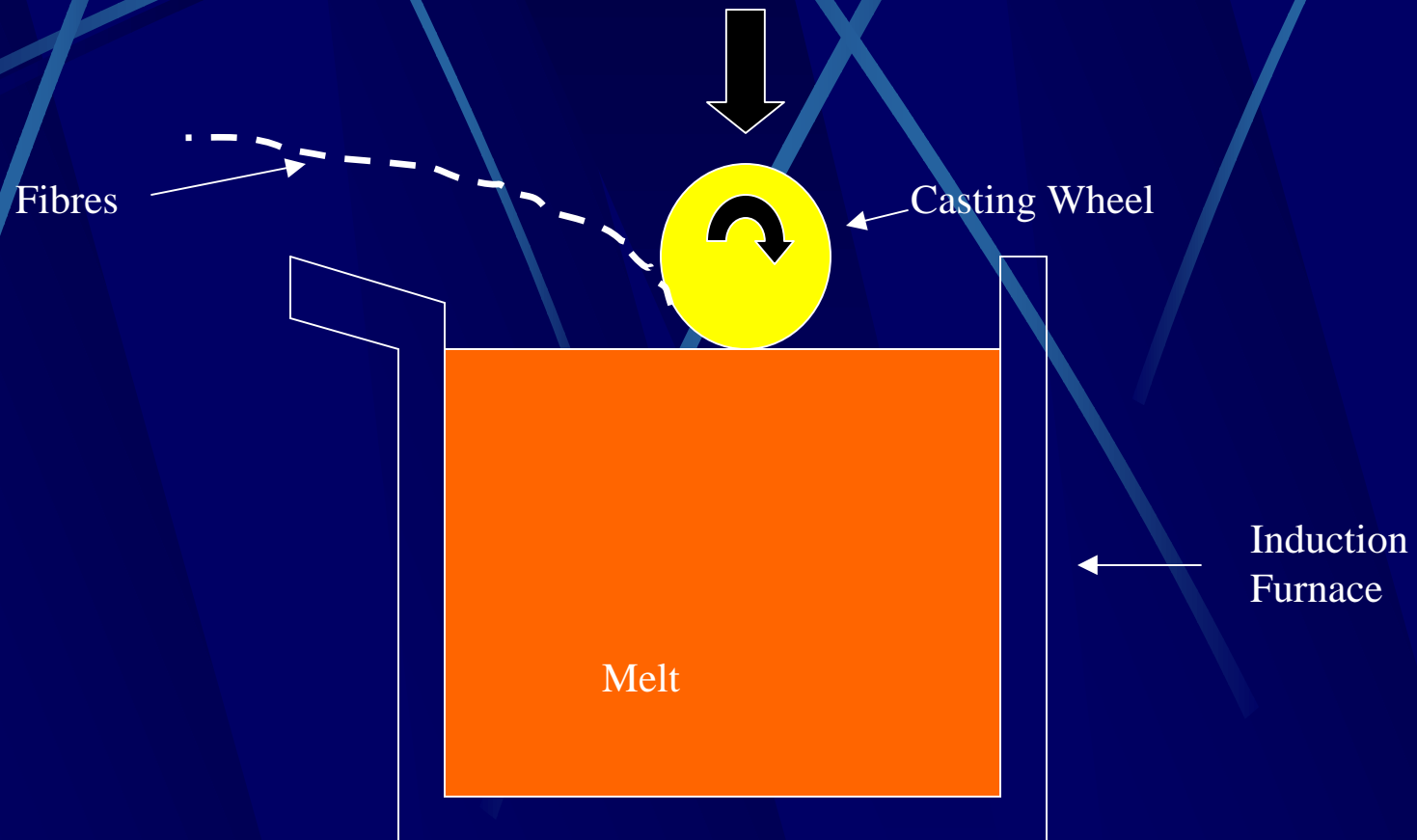


Stainless
Steels
Mn Steel
Fibres

Uses : Refractory and Concrete Reinforcement

Size Range : 3-50 mm long x 0.3 - 1.0mm ED

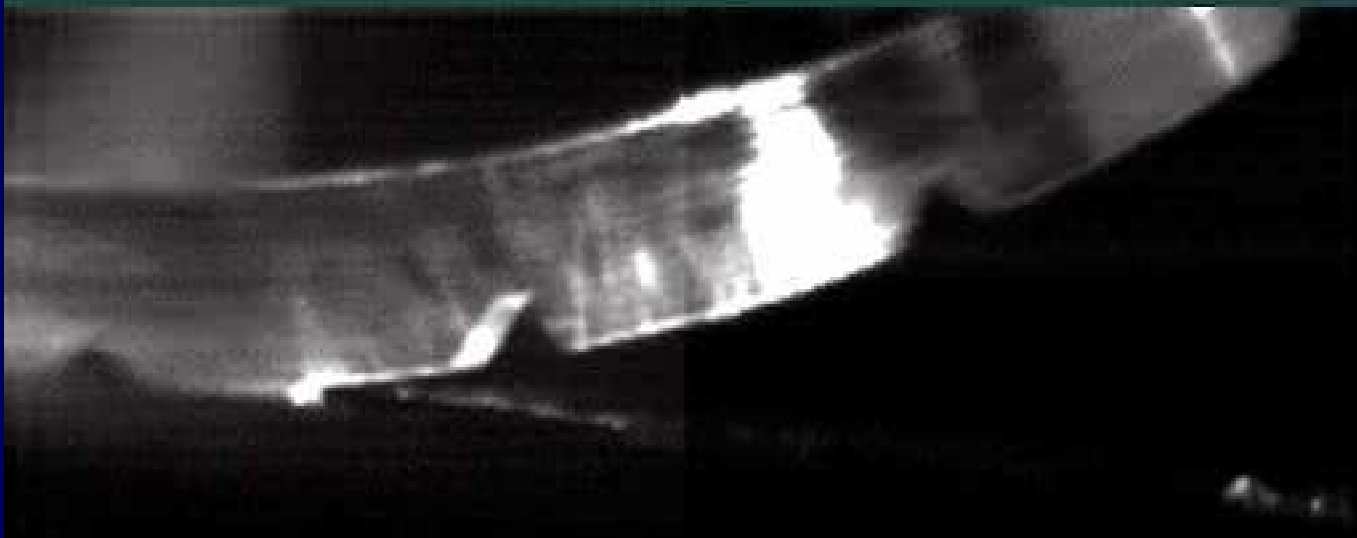
Melt Extraction Process



Melt Extraction

(C) Forschungszentrum Rossendorf

Dr. A. Cramer / Abteilung MHD



Melt Overflow

Scrap
&
Alloys

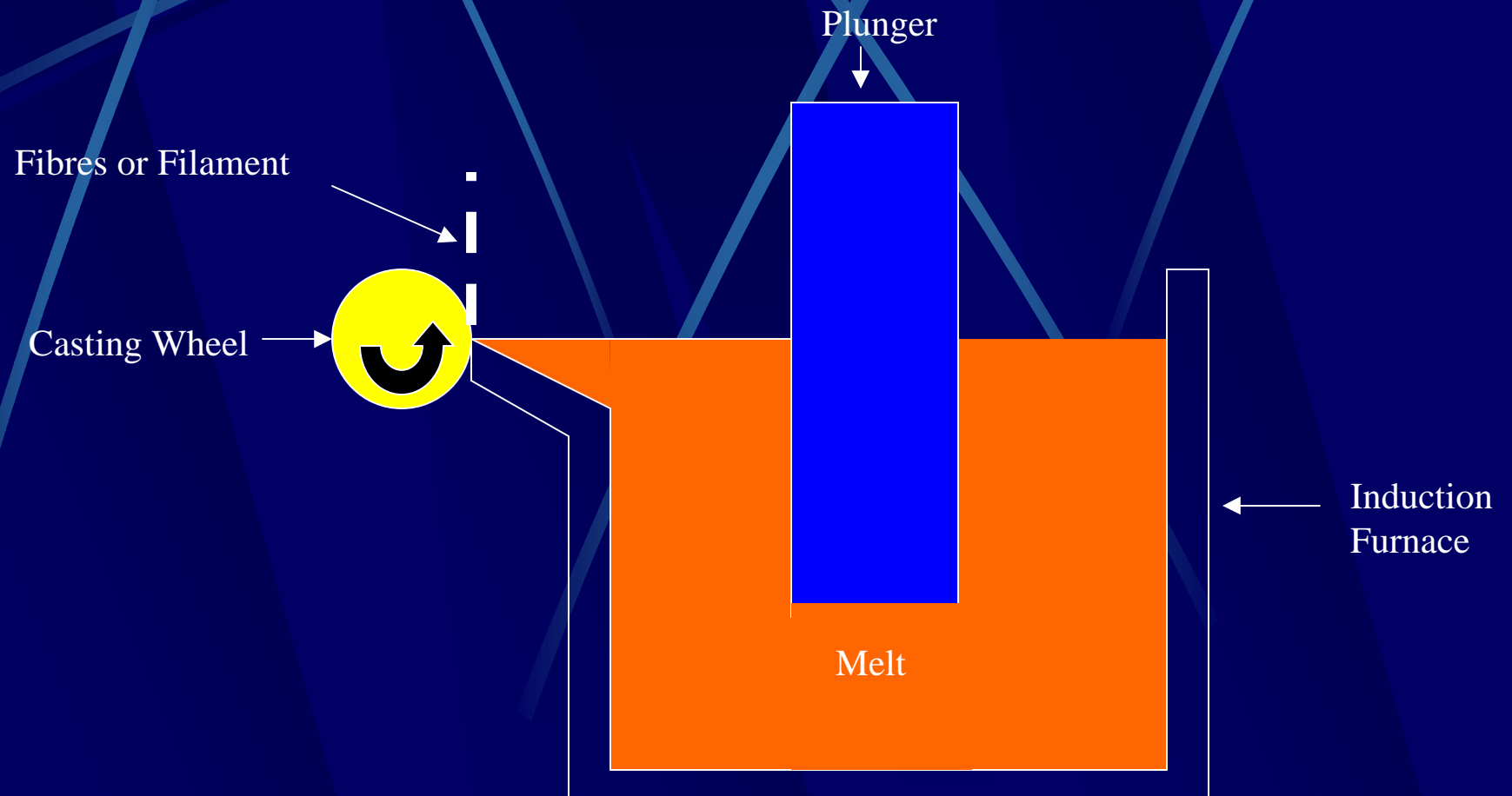


Stainless
FeCrAl
Mn Steel
Ti alloys
Cu alloys
Al alloy
Copper
Fibres &
MICROTEX

Uses : Refractories, Construction, Filtration, Industrial Catalysts, Automotive

Size Range : 5-50 mm long x 0.04-0.20 mm ED, Semi-continuous x 0.07 mm ED

Melt Overflow Process



Filial Brass



Melt Overflow Advantages

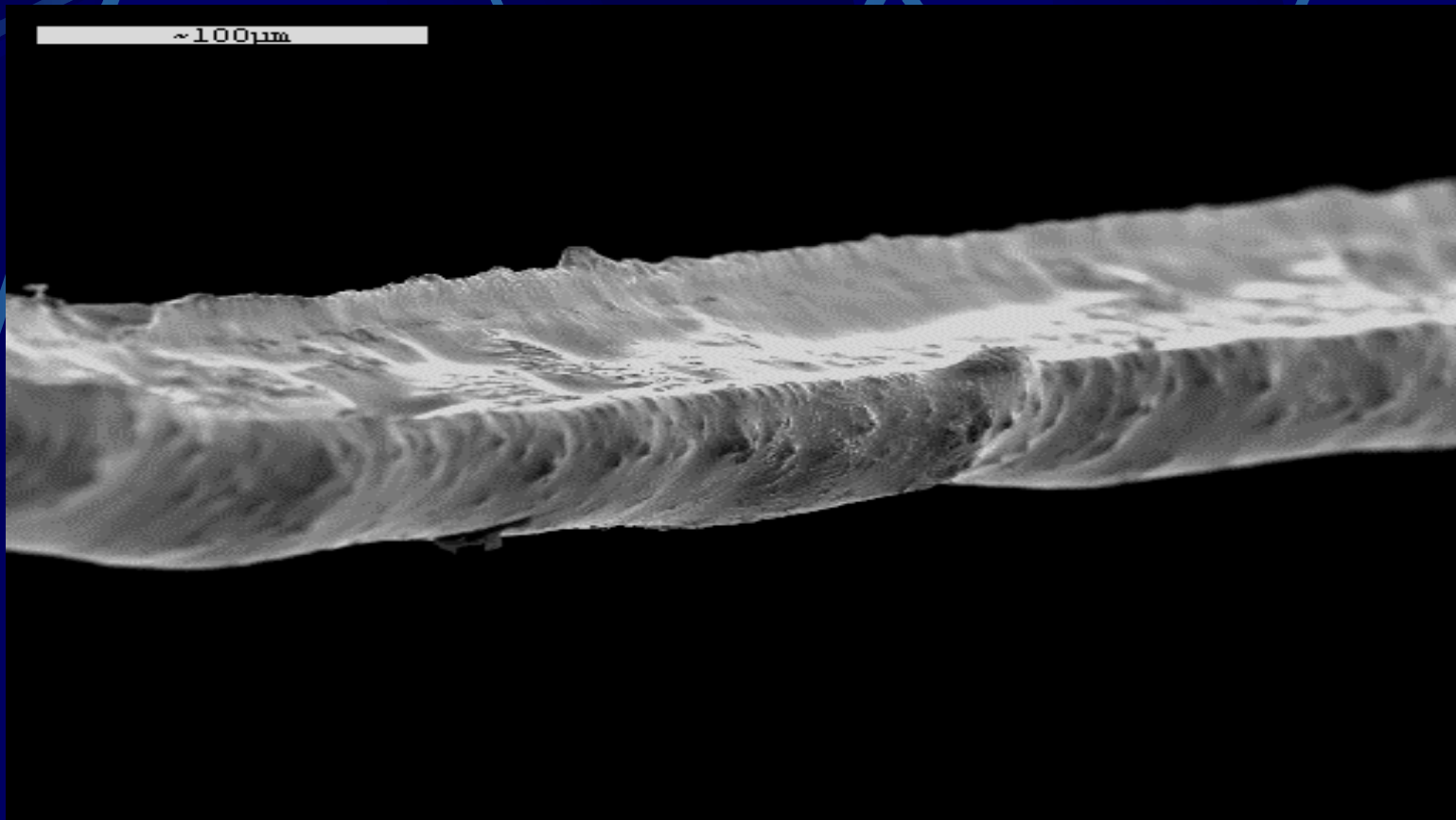


- Controllable
- Consistent Product
- Tailored Alloys
- Tailored fibre diameters and lengths
- Fibres Count
- Consistent Performance

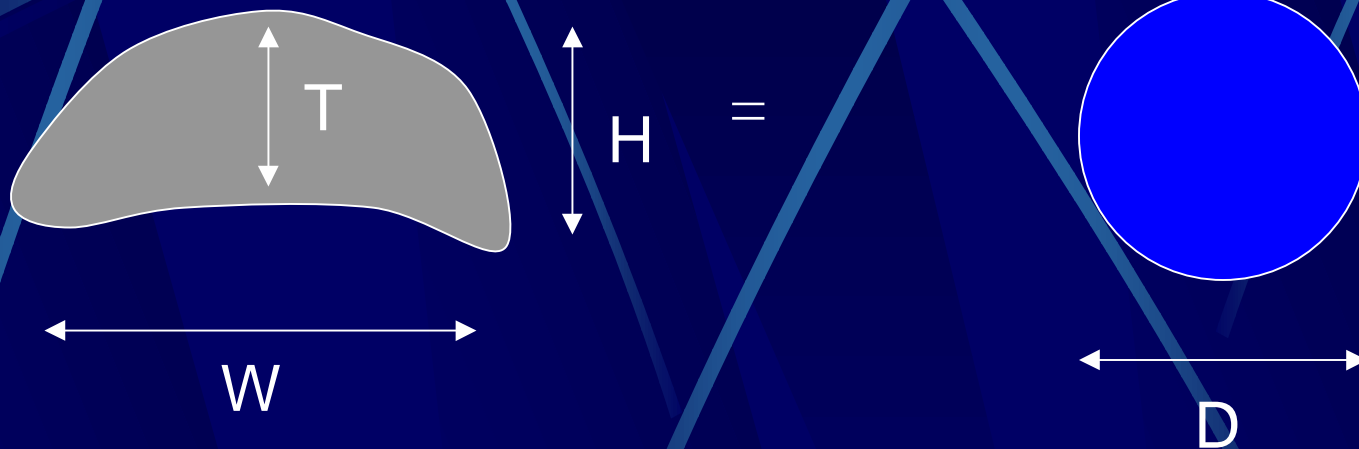
Key Issues

- Brass is different from Steel
- Melting Temperature - 980c
- Casting Temperature - 1100c
- Surface Tension Control
- Health & Safety - Emissions

Properties



Shape/Aspect Ratio



Example Sample:

$$W = 2000 \mu\text{m}$$

$$H = 400 \mu\text{m}$$

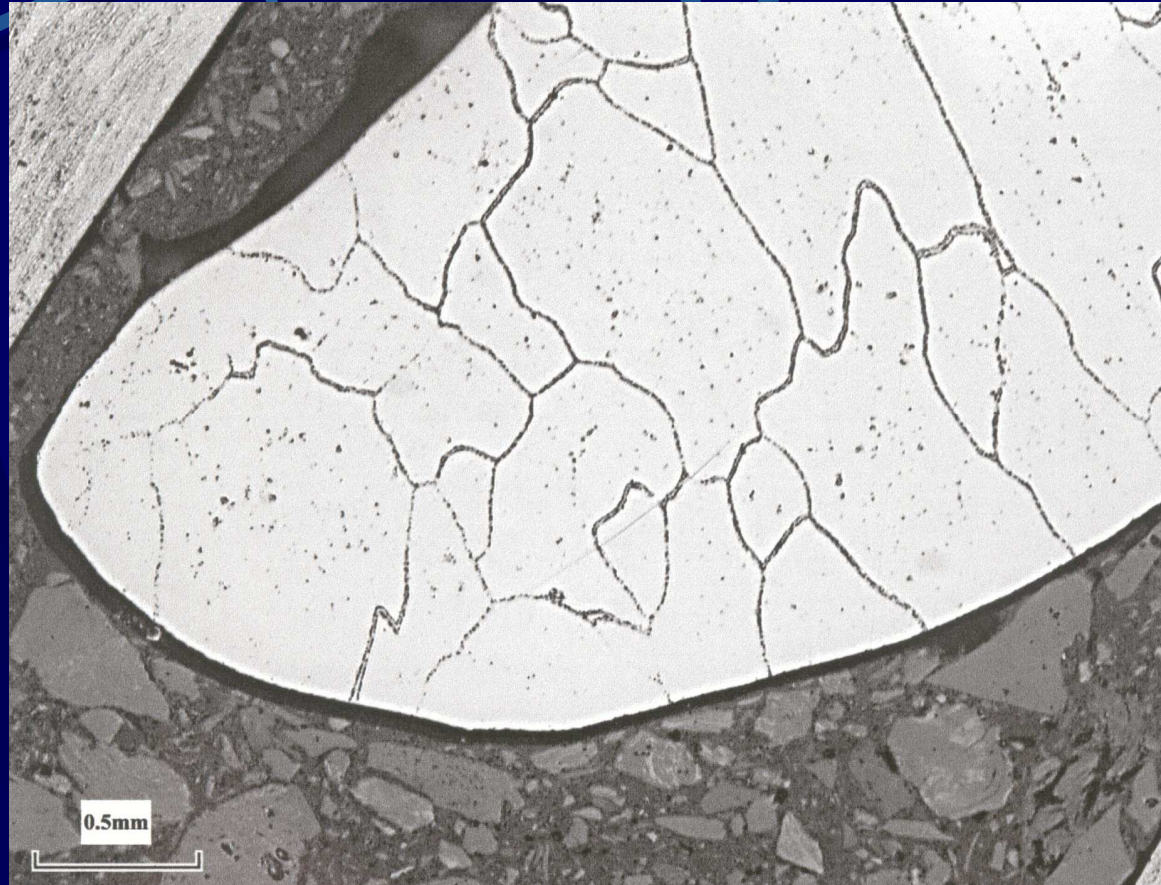
$$T = 200 \mu\text{m}$$

$$D \sim 700 \mu\text{m}$$

Our Material Delivers:

30% increase in surface area by volume

Properties



MICROFINE Products

MICROFINE[®]



METAL FIBRES FOR BRAKE PAD COMPOUNDS

- Lead Free - No impurities
- Replaces Asbestos
- Comprehensive Alloy Range
- Corrosion Resistant - No 'Rust Locking'
- Increased - Friction Mix Durability
Thermal Conductivity
Overall Performance

FIBRETECH

FIBRETECH[®]

What's next?

- Components - sintered and brazed
- Compressed Air Silencers
- Flame/Spark arrestors
- Filters
- Wire ?
- New Alloys - better strength / corrosion-resistance