



# WINTER

**Diamond  
Coated  
Wire**

(electroplated)

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## Diamond Coated Wire

(electroplated)

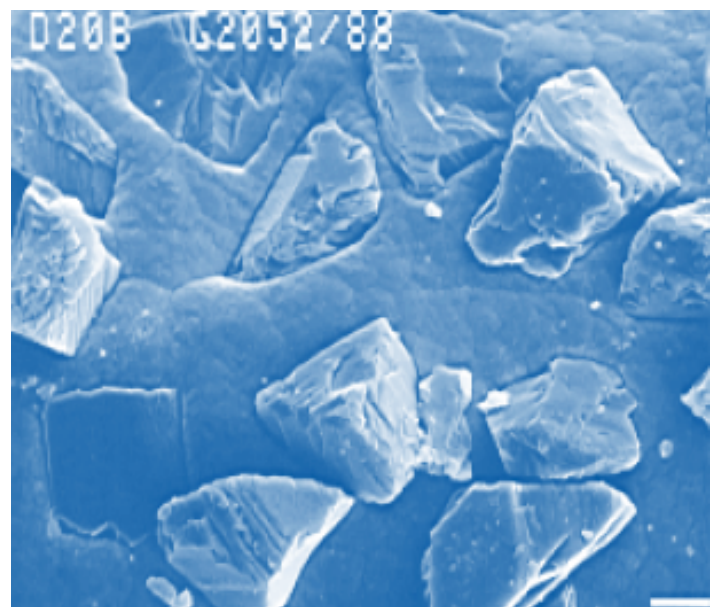
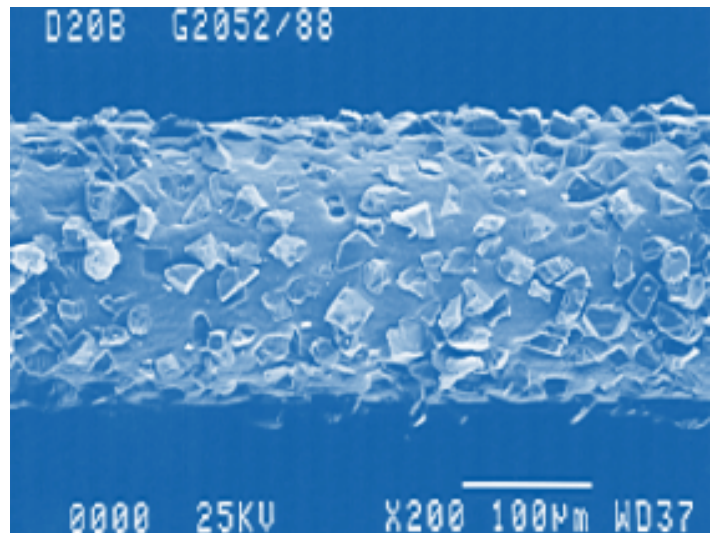
Preferably used for the cutting of hard, brittle materials like :

- Silicon
- Silicon carbide
- Sapphire

- Apart from the environmental advantage, this wire also permits considerably higher cutting speed than the conventional method using wire with slurry.
- Available up to a length of 4,000 metres
- Available diameters :  
230  $\mu\text{m}$   
(grit size D20B)  
for Si  
350  $\mu\text{m}$   
(grit size D25)  
for SiC or sapphire

## SEM pictures of electroplated diamond coated wire

(various magnifications)



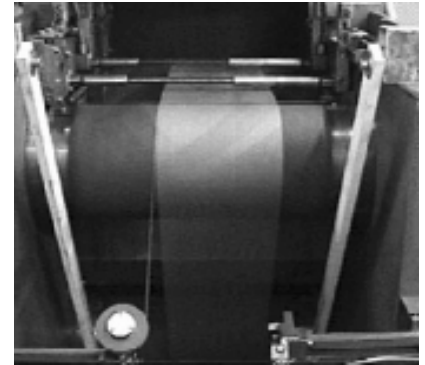


## Diamond Coated Wire (electroplated)

Diamond coated wire (cross section)

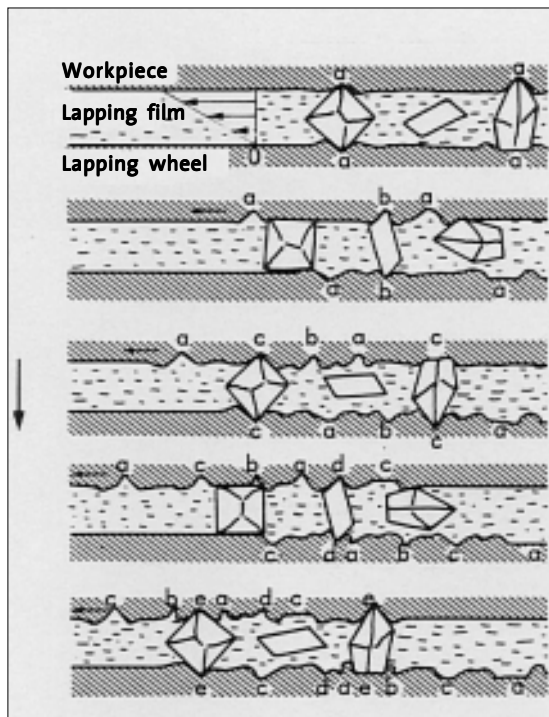


View into machine with diamond coated wire ready for cutting



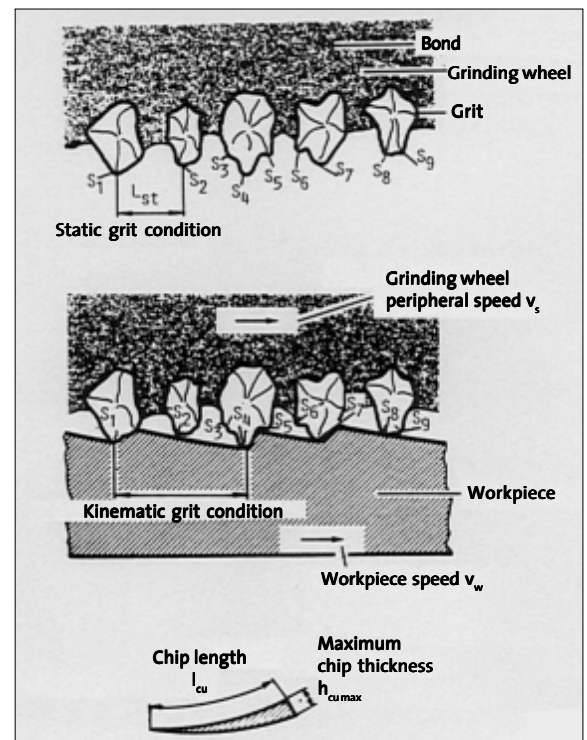
## Difference in the technology of lapping and grinding

### Lapping technology



- Rolling and fixed grits
- Crack inducing method
- Material removal by crack system in the surface
- Multi - directional scratches

### Grinding technology



- Fixed grits
- Chip removing method
- Material removal by statistical chip thickness
- Producing directed relative speed between grits and workpiece



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