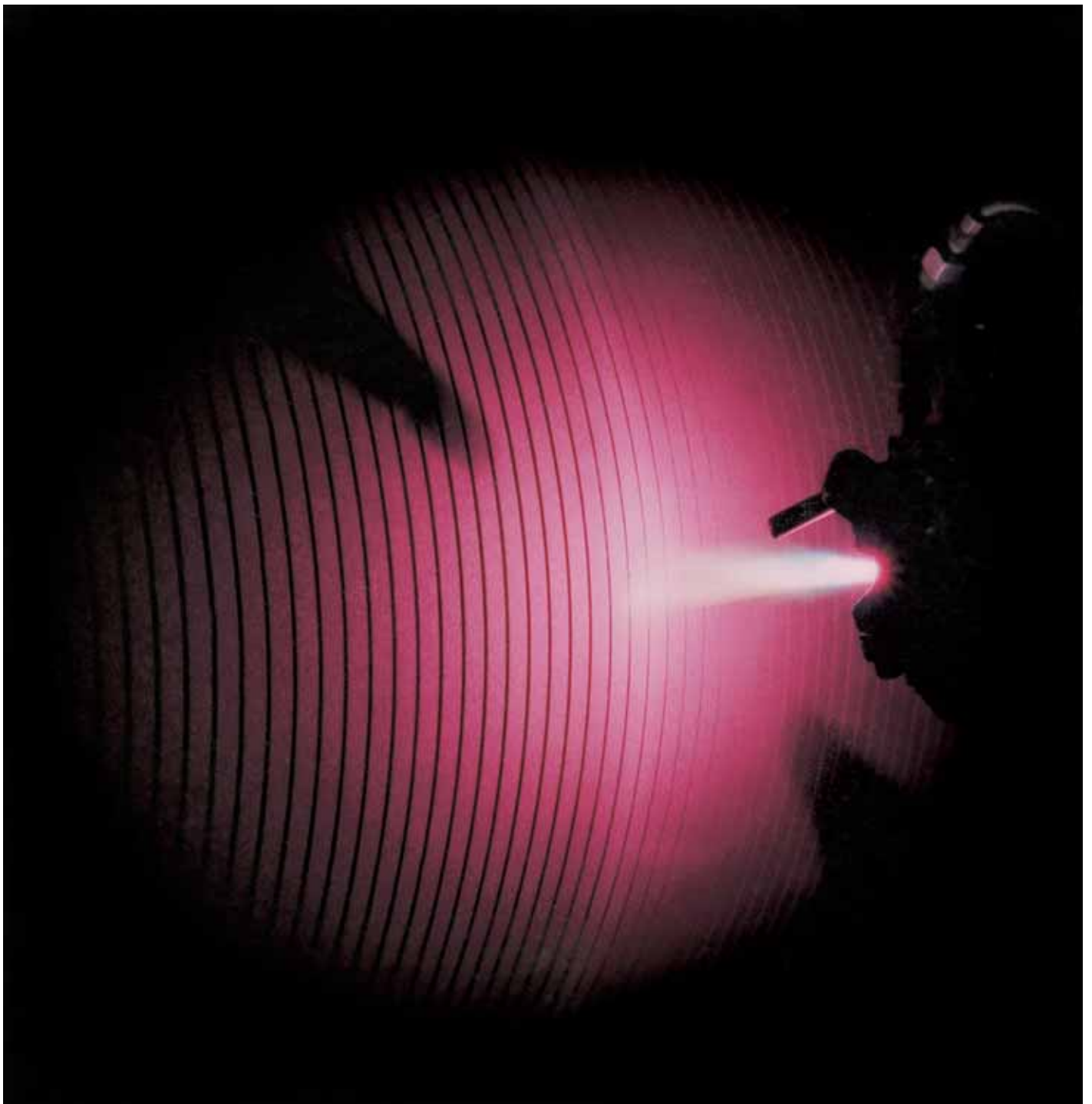
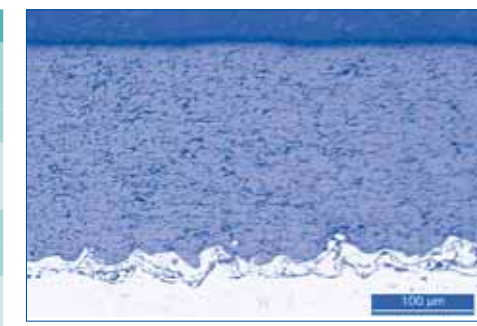


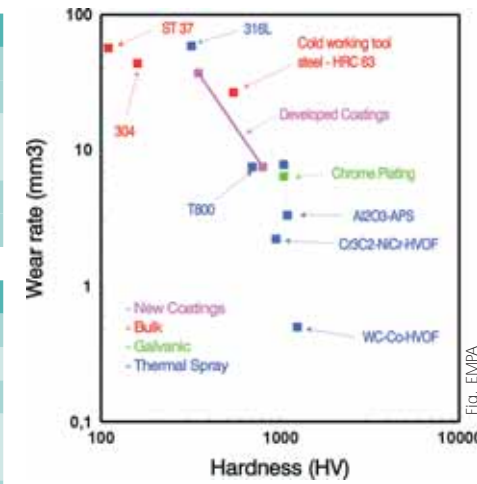
# Thermal Spray Coatings



Coating	Application target						Applications	max. temperature of application (°C)	max. thickness of coating (mm)	hardness (HV 0,3)	Comment
	Corrosion protection	Oxidation protection	Wear protection	Slide coating	Primer	Repair coating					
<b>Ceramic B51</b>											
Al <sub>2</sub> O <sub>3</sub>			☺				1000	0.3	1000–1200 ~62–66 HRC	Primer coat may be necessary, surface quality to Ra 0.05 µm	
Al <sub>2</sub> O <sub>3</sub> · TiO <sub>2</sub>			☺				550–1000	0.3	1000–1200 ~62–66 HRC	ditto	
Cr <sub>2</sub> O <sub>3</sub>			☺				600	0.3	1200–1400 ~68–70 HRC	ditto	
ZrO <sub>2</sub> Y <sub>3</sub> O <sub>2</sub>			☺				limited due to base material	0.5	750–850	Primer coat may be necessary	
<b>Carbides B52</b>											
WC-CO			☺				540	0.1–0.5	1000–1200 ~62–66 HRC	Working only possible with diamond tool, surface quality to Ra 0.05 µm	
WC-CoCr			☺				540	0.1–0.5	1100–1200 ~64–66 HRC	ditto	
Cr <sub>3</sub> C <sub>2</sub> -NiCr			☺				850	0.1–0.5	750–850	ditto	
<b>Light/non-ferrous metals B53</b>											
Aluminium	☺								2	40	
Molybdenum			☺	☺	☺				350	0.5	700–850
Brass/Bronze				☺						2	
<b>Alloys B54</b>											
Steel alloy	☺		☺			☺	540	2	250–500		
NiAl, NiCr					☺	☺	700	0.5	160–350		
MCrAlY M = Fe, Co, Ni	☺	☺					850	0.2–0.5			
Co base (Stellite)			☺				820	0.5	400–600 ~40–58 HRC		
Co base (Tribaloy)			☺				700	0.5	600–800		
Ni base (Hastelloy)	☺						1050	0.5	250–300		
<b>Self fluxing materials B55</b>											
Ni base with hard phases			☺				540	2	400–900 ~35–60 HRC	thermal thickening possible	



The image of the surface pattern shows the base material (white), the primer coat (approx. 40 µm thick), and the extremely homogenous ceramic coat of aluminium oxide. The top edge of the image shows the embedding material, needed to produce the image.



The hardness wear diagram clearly shows that hardness does not imperatively result in lower rates of wear. Since every application is different, the best results can be achieved from competent consultation based on our experience.

## Modern technology combined with experience and knowledge

Development and production of surface coating is our speciality. As a result of long years of experience we are able to offer sophisticated technology for a multitude of applications in all branches of industry - for individual components, serial production and repairs. Our range covers over 150 coating materials in wire and powder form.



Tungsten carbide on a nozzle ring for turbo chargers. The coating is exposed to extreme abrasion and erosion at high temperatures.

High-quality coatings require modern systems and control engineering.



The densest coatings are achieved during high-speed spraying (HVOF). Coating materials are applied at up to 1000 m/s at approx. 3000°C. The temperature of the substrate remains under 150° C.

The rework of the sprayed coatings requires a high level of knowledge and experience and can be carried out in-company for lengths up to 3m.



**Tricky coating tasks are our challenge – give us a call!**

## Buser coating processes – modern technology combined with experience and knowledge.

Development and production of surface coating is our speciality. As a result of long years of experience we are able to offer sophisticated technology for a multitude of applications in all branches of industry -

for individual components, serial production and repairs. Our coatings enable the low-cost, custom-made manufacture and reconditioning of high quality industrial components.

We coat serial components up to 15 tons in weight and up to 8 meters long. Please contact us with enquires for larger parts.

We are the only company in Switzerland to offer both plastic, metal, ceramic and tungsten carbide coatings and hardplating welding and repair welding of castings as well.

Coated components stand up to the test of toughest application conditions protecting against wear and corrosion and offering thermal and electric insulation. The quality of our work is underlined by the certification to ISO 9001 and GTS.

### **Our service in surface technology:**

- competent, extensive advice
- design and production of workpieces
- preparation of the workpieces to be coated.
- coating to defined specification
- on-site coating
- quality control with report
- packing and shipping worldwide

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