

Creating a new Technology

Memories of an Innovation Assistant



Herzogenburg

05. May 2009

Overview

- **History of development**
- **Performace of Coating**
- **examples of application**
- **Retrospection**

Start Innovation Assistant 2005

Start at Busatis in January 05

Technology & Product Design Development

Process-development Spraying Metal Coatings March 05

Parallel innovation assistant seminar, campus Krems

Tight cooperation with R&D institutes (AC²T, TU Vienna)

First Steps

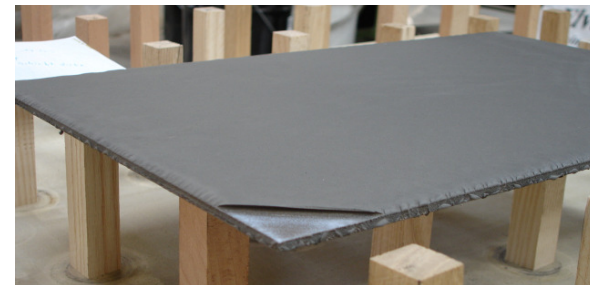
Ideas – how to coat

Equipment suiting requirements

Needs for automatisisation

Exploring process window

Intensive testing phase (spray&fuse)

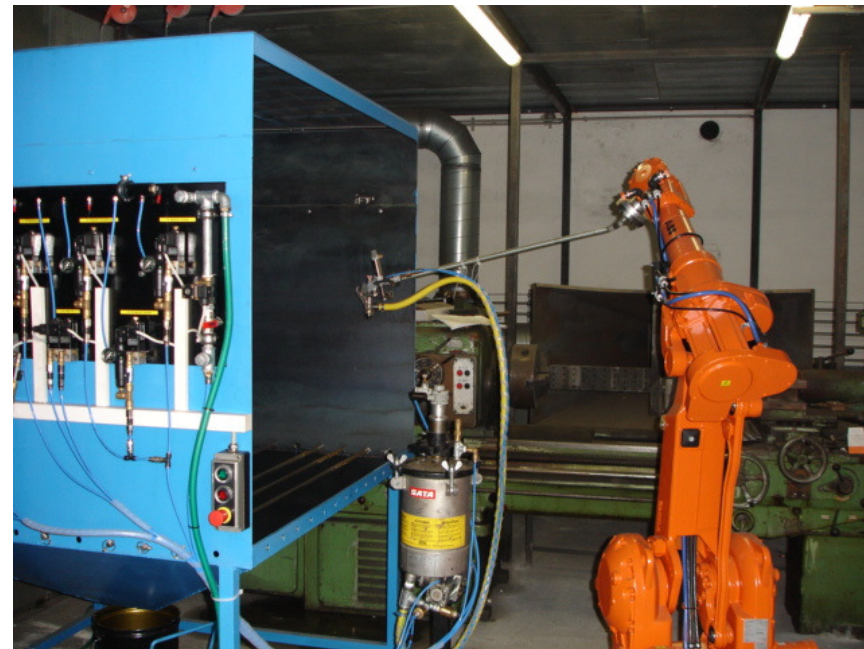


production facility

coating-rig for research &
development and small batch
production

spraying device fully automatised

spray gun handled with robot

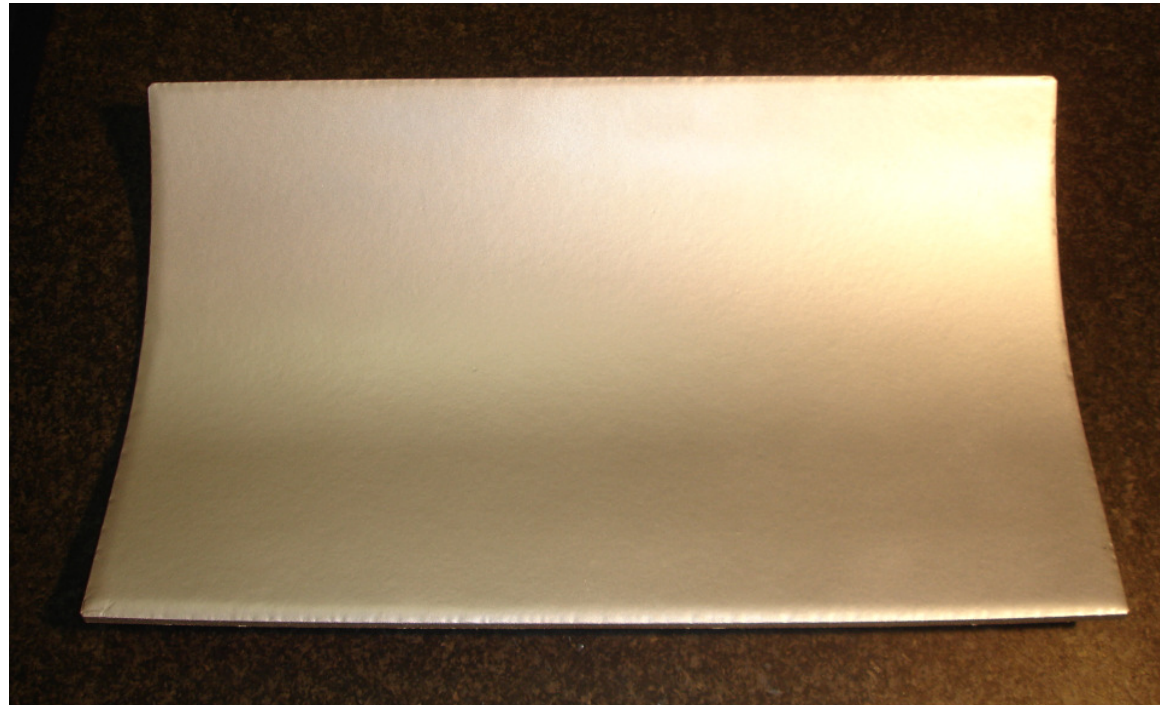


Fused BusaDUR-wear plates



Constant results during test runs with different powder lots
surface smooth, diffusion quality coating-substrate very well

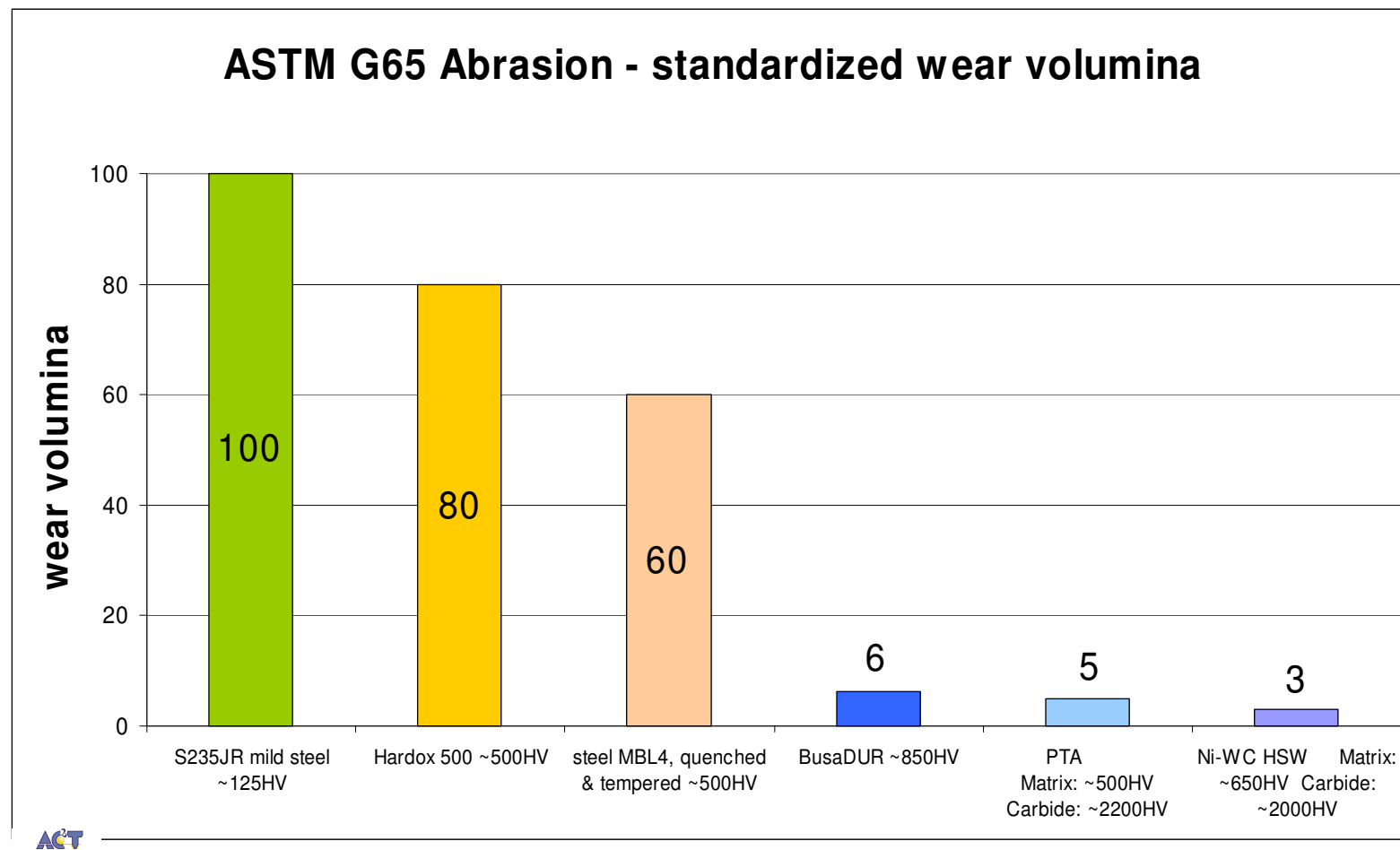
BusaDUR - Technology



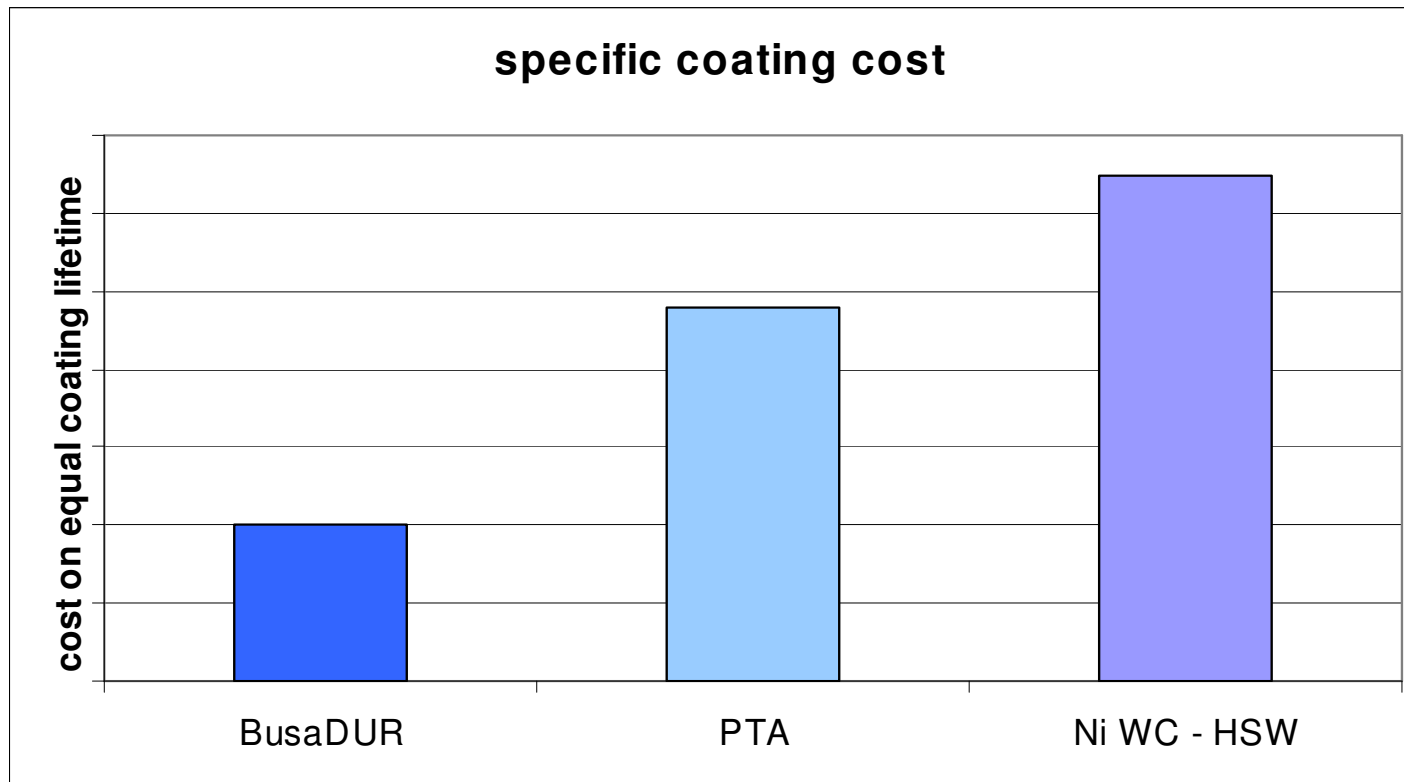
Phase 2 – Prototyping & Forming

Support of Lower Austrian Government – Funding of Prototyping

general wear chart



Specific coating costs - alternative Technologies



Standardized cost - same wear amount on same sized surface areas

BusaDUR Coating Performance

max. coating thickness ~ 2,5mm

min. coating thickness 0,5mm

surface roughness Ra 2 - 4 μ m

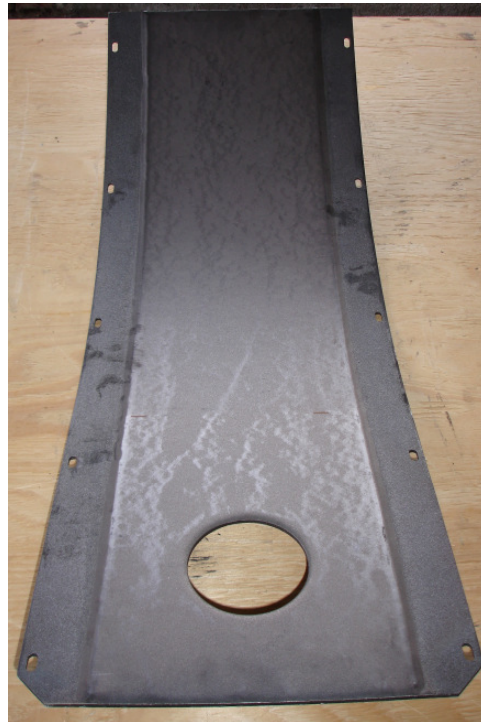
porosity max. 5%

concave forming approved (post sintering)

vertical areas formable (post-sintering)

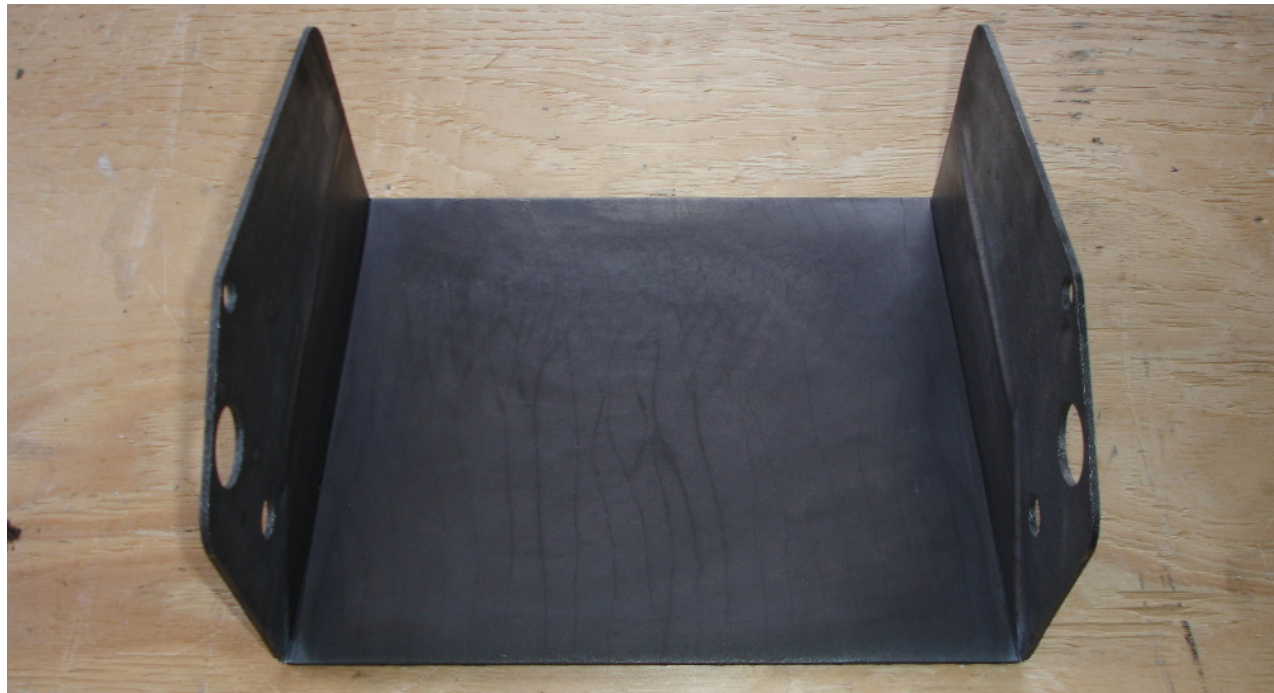
Sandwich cuttable (water-jet, lasercutting)

Forming of existing BusaDUR-parts



cold forming - rolling

Forming of existing BusaDUR-parts



cold forming

Forming of existing BusaDUR-parts



warm forming

Benefits of BusaDUR

Six times higher lifecycles (FT – Agri-Industry)

Hardness 775-900HV (62-67HRC)

Lowest specific coating cost

Coating of huge areas possible

Coated parts shapeable

Very smooth and homogenous surface without finishing treatment

Retrospection Innovation Assistant

Appeal for companys (KMU) to get fresh, innovative human capital

Lowers first Job Barrier for young scientists

Good overview of Innovation-Management – courses campus Krems

Contact to Lower Austrian Government – further Support & Funding

Bureaucracy was as low as possible

A bit more personal coaching desirable