

A blue train engine is positioned on a set of tracks. The foreground is filled with a large pile of grey gravel. The background shows a cloudy sky and some distant structures. The text is overlaid in a bold, yellow, italicized font.

***The Liberty Wheel project:
Part 7: Liberty Wheel line
tests May 2019***

Andrea Bracciali – Gianluca Megna

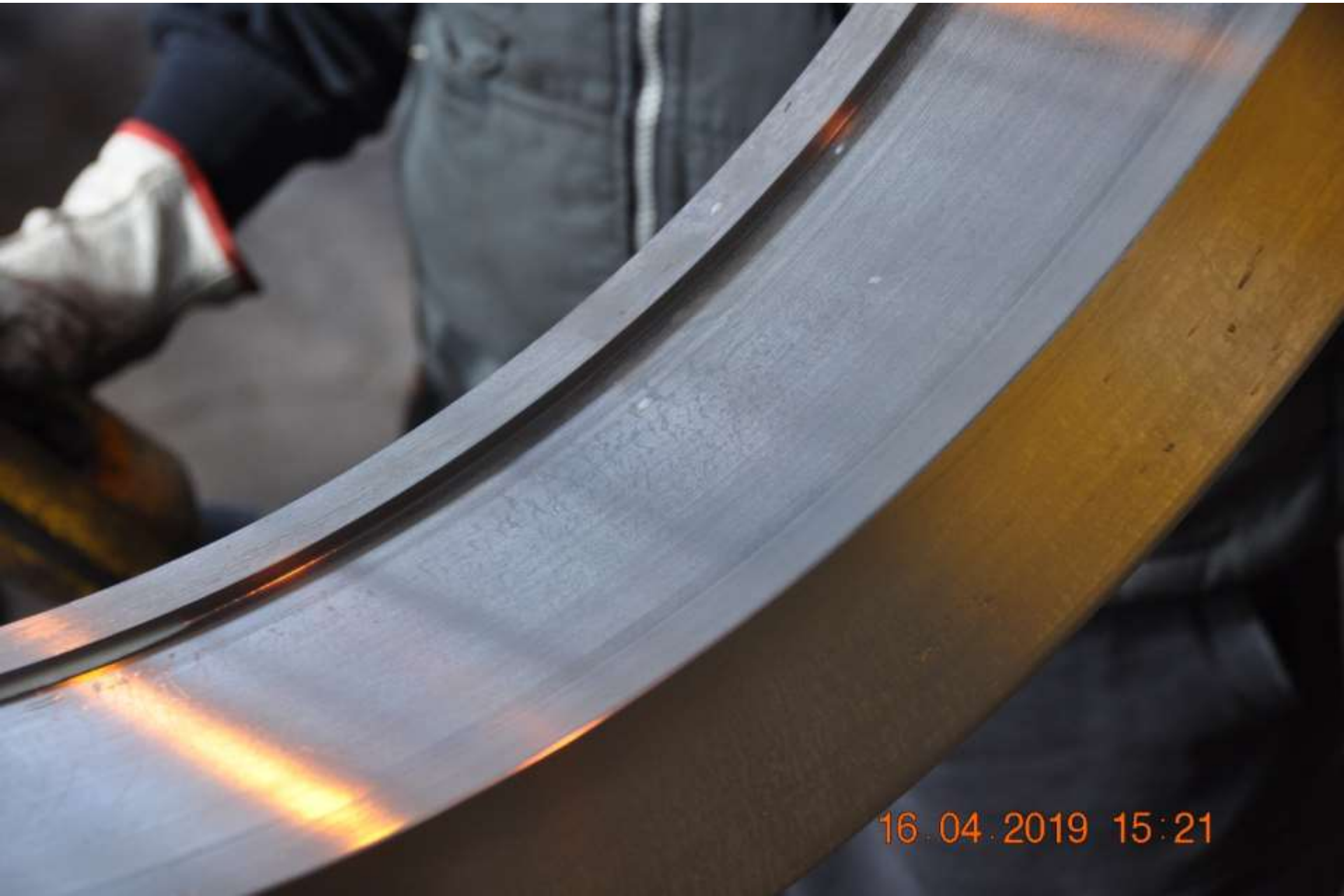




Silvano Baraldi spheroidal cast iron foundry



Machining tapered B5 tyres



16.04.2019 15:21

Machining ADI 800 wheel centres

CNC lathe

CMM dimensional check

**ONLY STANDARD TOOLS
WERE USED!!!**

(nothing really exciting...)

Andrea Bracciali
Manufacturing a



The first Liberty Wheel with fitted wheel centres



16.04.2019 11:07

Shrink-fitting tyres on Liberty Wheel centres...



The «dream team» ... 😊



16 04 2019 15 58

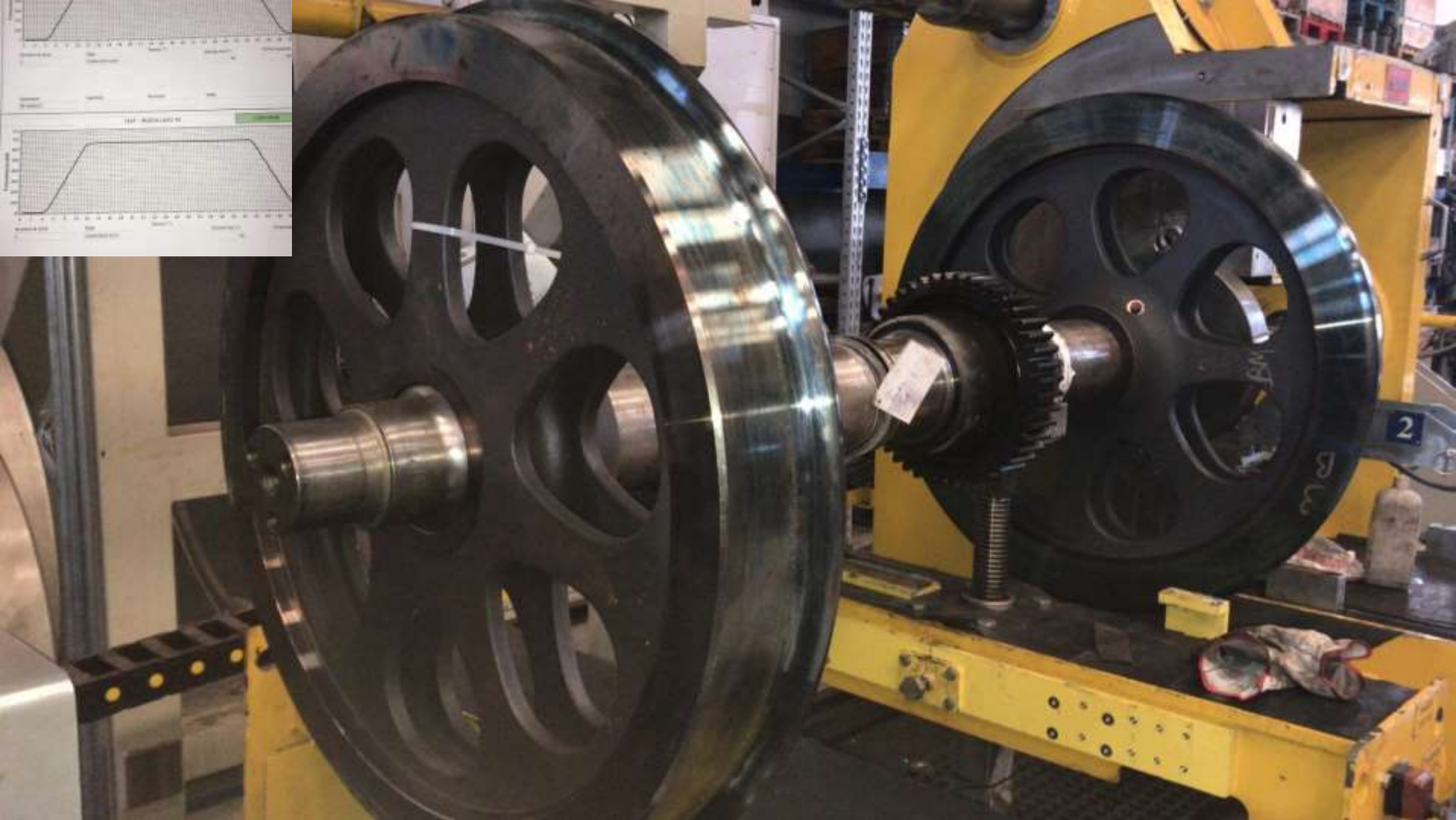
The job is done (with great satisfaction)



16 04.2019 17:15



Pull-out tests



Incredibly, the wheelset is naturally balanced!!!





Painting...



Painting...



Tetris?



Line tests
Iseo
14-16 May 2019



The bogie ready to be fitted under the DMU
ALn 668.1053



The vehicle just outside the workshop

TROVALVOLA

RUBINETTO ISOL. INVERTORI

ASSE 2
BOCCOLA 3

ASSE 1
BOCCOLA 1

The maiden flight...



Preparing the measurement field...



A nice pass-by



Measuring the track decay rate



Measuring rail roughness



Measuring speed



Measuring wheel roughness





Conclusions

- A new ADI wheel centre for conventional rail without tread braking was designed, manufactured and tested
- Everything went as expected
- Mass is lower, noise is lower
- Easy manufacturing, possibly more than one hundred suppliers in Europe
- Infinite life of axle and of wheel centre... see the other presentations!!!!