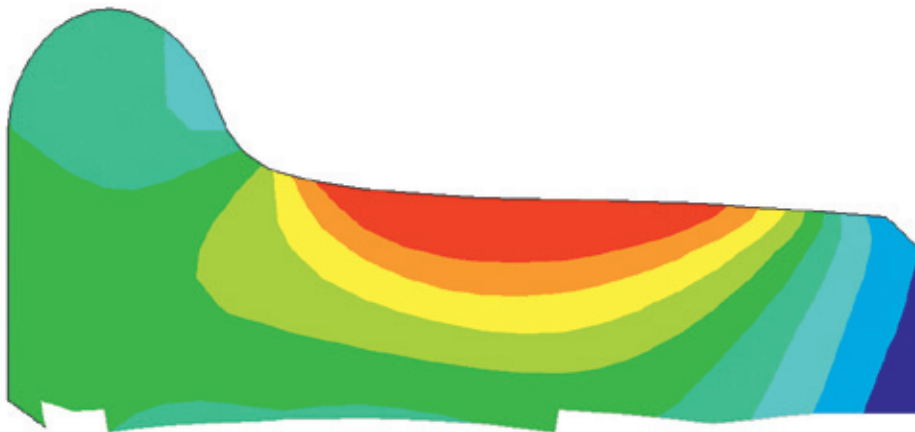


VMS™

Valdunes Mountain Safety™

FREIGHT



HIGH BRAKING
PERFORMANCE

HIGH SAFETY
LEVEL

PROVEN WHEEL
DESIGN

Wheel especially designed
and developed for operations under
high thermal stresses.

Low stress level in the rim
and reduction of rim deflection.

**Decreased maintenance
downtime** through increased wheel
life and quality improvements.

100 % conformity with
new European standards:
EN 13979-1, EN 13262 and TSI.



➔ Over 150'000 wheels
in service in the world



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VMS™

Valdunes Mountain Safety™

FREIGHT



BACKGROUND

Due to high residual stresses on the traditional ORE freight wheel rim, failures appeared, especially after drag braking on mountain lines. The VMS™ concept was developed to **solve the problem** and thus **increase safety levels**.

SOLUTIONS

- **New low stress geometry** designed using CAD & FEA. (From 730 to 1'000 mm diameter).
- **TSI approved** and Railway technical qualification.
- **Efficiency checked** on bench and field testing.

RESULTS

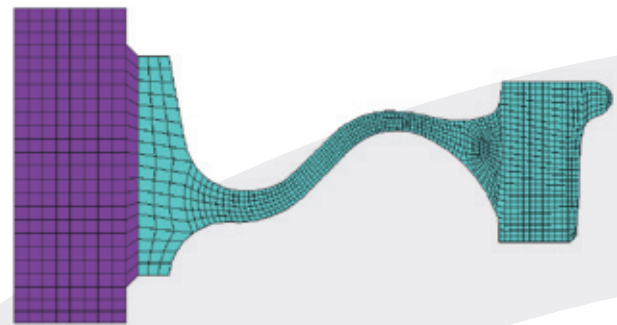
- **30 % greater** resistance against catastrophic brittle fracture.
- **50 % reduction** of the lateral rim displacement.
- Absorbed braking power up to 50 kW for 45 min.
- **Noise reduction** with a composite brake shoe.

BENEFITS

- Improved safety.
- Increased wheel life.
- Reduced downtime.
- Reduced life cycle cost.
- Improved braking performance.
- Noise reduction available.

OUR MAIN REFERENCES :

SNCF (France), SNCB (Belgium), DB (Germany), SBB (Switzerland), Ferronor (Chile), ONCF (Morocco), Transwerk (South Africa), UK, DSB (Denmark), Renfe (Spain), OEBB (Austria), ZS (Serbia), Comilog (Gabon)...



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