



BACKGROUND

Due to high tensile 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 630 to 1,000 mm diameter)
- **TSI approved** and Railway technical qualification
- **Efficiency checked** on bench and field testing
- **Safety improvement** toughness level under control

RESULTS

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

BENEFITS

- Improved safety
- Increase wheel life
- Reduced downtime
- Reduced life cycle cost
- Improved and controlled braking performance
- Noise reduction available

OUR MAIN REFERENCES

SNCF (France), SNCB (Belgium), DB (Germany), SBB (Switzerland), Ferronor (Chile), ONCF (Morocco), Transnet (South Africa), DSB (Denmark), Renfe (Spain), ÖBB (Austria), Comilog (Gabon)... Main European private fleet owners





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

VMS® wheel tyres equips all VALD 25, VALD 22, VALD 20 wheelsets able to replace all the standard parts of the market

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



VMS® IS AN EXCLUSIVE VALDUNES INDUSTRIES' PRODUCT

**OVER 200,000 WHEELS
IN SERVICE WORLDWIDE**

