

NOISE REDUCTION



REDUCTION
OF NOISE
AND VIBRATION

PASSENGER
COMFORT

RESPECT
OF NOISE
DIRECTIVES AND
REGULATIONS
(NOISE TSI)

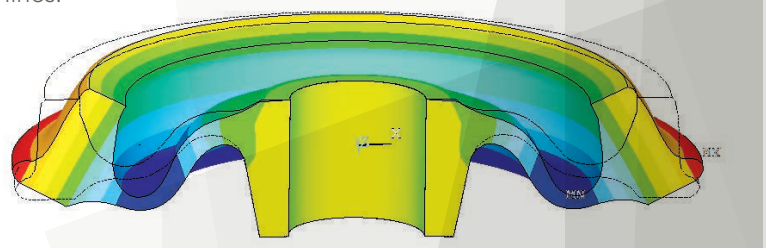
MG-VALDUNES OFFERS CUSTOMISED SOLUTIONS AND ITS WIDE EXPERTISE

- Solutions for squealing and rolling noise.
- Wheels specifically designed to reduce noise and vibrations, through optimised geometry.
- Damping devices, permanent or replaceable, for easier maintenance.
- Acoustic tests facility and simulation tools (STARDAMP, Deufrako).



COMPLETE SYSTEMS SPECIFICALLY DESIGNED
FOR DIFFERENT MARKETS

- **Urban transportation:** Tramways, LRVs and metros.
- **Suburban transportation:** Tram-trains and trains.
- **Passenger transportation:** Main passenger lines.
- **High speed and very high speed trains.**
- **Goods transportation:** freight trains.

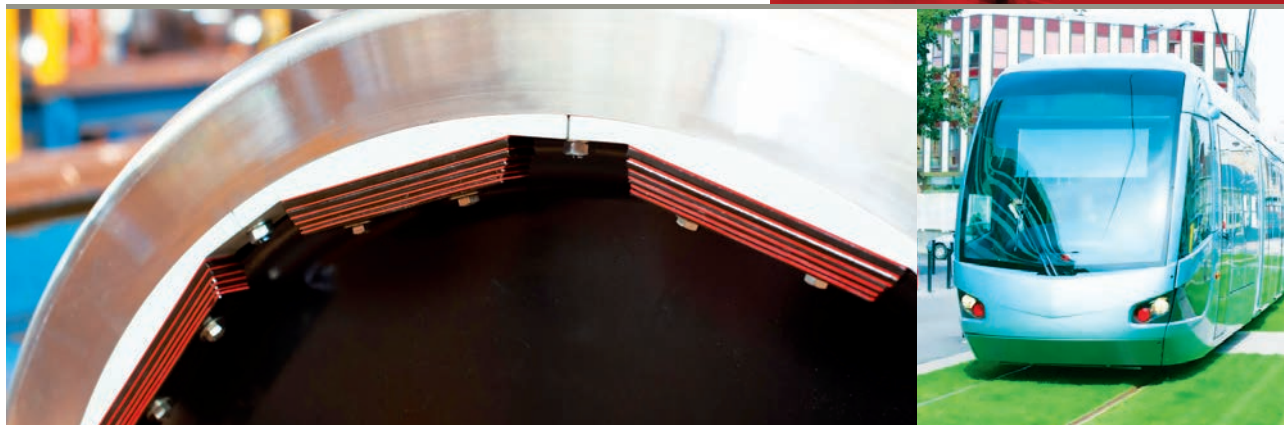


PERSONALISED SOLUTIONS
A REAL EXPERTISE

 **VALDUNES**
MA STEEL

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NOISE REDUCTION



TRAMWAYS AND LIGHT RAIL VEHICLES

- **Speed:** up to 80 kph.
- **Challenge:** Squealing noise, especially in tight curves, impairing passenger comfort and generating public nuisance. Low or ultra low floor vehicles.
- **MG-Valdunes solution:** resilient wheel, with wide range of radial stiffness - from rubber sprung wheel to VUT™ low stiffness wheel. Potential use of damping devices according to specific needs (damping rings, vibration absorbers, permanently fixed or removable).
- **Result:** squealing noise reduced up to 10 dB(A).

METROS, TRAM-TRAINS AND SUBURBAN TRAINS

- **Speed:** up to 120 kph.
- **Challenge:** Squealing noise in urban zones, impairing passenger comfort and generating public nuisance. Vibration propagation in densely populated areas.
- **MG-Valdunes solution:** resilient wheels, damping rings and optimized version that provides high efficiency and repeatability (VLN™-OPT).
- **Result:** Squealing noise reduced up to 15-20 dB(A) on specific frequencies.

MAIN PASSENGER LINES AND FREIGHT TRAINS

- **Speed:** up to 200 kph.
- **Challenge:** rolling noise, detrimental to passenger comfort, generating public nuisance and not compliant to noise regulation or directive.
- **MG-Valdunes solution:** composite vibration absorbers; VMS™ low stress wheel coupled with composite braking blocks.
- **Result:** noise reduction up to 5-7 dB(A).

HIGH AND VERY HIGH SPEED TRAINS

- **Speed:** 200 kph and above.
- **Challenge:** rolling noise, detrimental to passenger comfort, generating public nuisance and not compliant to noise regulation or directive.
- **MG-Valdunes solution:** optimised wheel geometry coupled with dampening device or shields.
- **Result:** standard noise reduction up to 4 dB(A).

OUR BUSINESS SPIRIT
INNOVATION & PERFORMANCE

