

PROFIL® RND Rivet Nut: Mechanical Attachment to Press Hardened Steel With No Heat-Affected Zone

OVERVIEW

Customer:
**Global Automotive
Manufacturer**

Application:
**Vehicle Side
Impact Beam**

Solution:
RND Rivet Nut

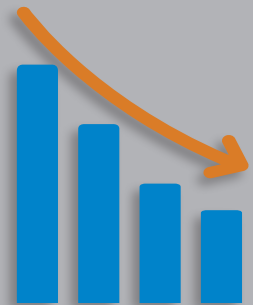
For this application, the switch from a weld nut to the PROFIL® RND Rivet Nut completely eliminated the chance for cold welds and delivered reliable side impact performance that was previously compromised.



CHALLENGE

Compromised performance of side impact beam

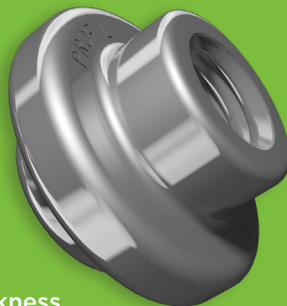
- Was using a weld nut on side impact beam
- Working with extremely hard material - 1,500 MPa steel
- Damage caused from welding process - cold welds, weld splatter
- Changing part geometry from large welding heat zone
- Sturdiness of side impact beam compromised due to weld nut install process



SOLUTION

PROFIL® RND Rivet Nut

- Mechanically attached joint solution
- Suited for a range of dynamic, static and impact load conditions
- Suited for extremely high dynamic and static axial loads
- Used for sheet metal thickness up to 3.50 mm
- Compatible with surface-treated, galvanized, painted components



RESULTS

Improved performance by switching to PROFIL® mechanically attached joint solution

- Use of mechanically attached fasteners in press-hardened steel delivered the required part performance and reliability that wasn't achievable with weld fasteners
- No part damage from cold welds or weld splatter
- No material thinning during riveting process
- Reliable side impact performance surpassing all OEM requirements

100%
Elimination of
Challenging Weld
Processes