

Case Study: Product Development

Classification of joints



Problem

For a customer in the automotive industry, all joints were classified by the customer's development department during the product development phase and handed over to Atlas Copco as the basis for the planning assignment. According to the customer's specifications, A-classified joints must be performed with an electric tool. The vehicle to be designed comprised a total of 967 joints, of which 341 were A-classified by the development department and thus classified as safety-relevant. Assuming that every A-classified joint had to be tightened with an electric tool, there was an approximate investment volume of € 6 million for new tightening technique for the vehicle in question (not taking into account combined joints and special tightening tools as well as mechanics at this point in time).

Solution

Based on empirical values from previous projects, also taking into account the currently valid standards and guidelines, the classifications of the joints were assessed and partially scrutinized during the tool selection. After providing feedback to the development department on the relevant joints, the number of A-classified joints was reduced to 329. According to the customer's specifications, these joints could now be carried out with a cordless tightening tool (specification for B- and C-classification).

REDUCED INVESTMENT
VOLUME OF
APPROXIMATELY

5%

Added value for the customer

Due to the reduced number of A-classified joints, the investment for the required EC tightening technique could be reduced. Additionally, this reduced ongoing maintenance costs, as these are much lower with a cordless tightening tool than with an electric tool.

In addition, the elimination of the process safety test for the lower joint classes has streamlined the release process in the startup phase for the joints concerned. Furthermore, the documentation work over the entire product life cycle was also reduced, since, among other things, no long-term archiving of the tightening data and no additional documentation tools were required.



REDUCED INVESTMENT VOLUME:
FOR NEW EC TIGHTENING TECHNIQUE:
APPROX. € 210,000 MINUS INVESTMENT
FOR CORDLESS TIGHTENING TOOLS



FASTER RELEASE PROCESS
IN STARTUP AND REDUCTION
OF PERSONNEL DEPLOYMENT FOR
SAFEGUARDING OF THE PROCESS
(SECOND HAND CHECK)



SAVINGS IN MAINTENANCE
OF APPROX. € 100,000 OVER THE ENTIRE
PRODUCT SERVICE LIFE



**REDUCED PLANNING WORK DUE
TO THE**
OMITTED INFRASTRUCTURE (IT,
DOCUMENTATION, ETC.)

Atlas Copco

Atlas Copco Tools Central Europe GmbH

Langemarckstraße 35, 45141 Essen

✉ ac-consulting@atlascopco.com | www.atlascopco.com