

Enhancing Pallet Stability and Sustainability with Samson Pallet Stability

Client Profile

Industry: Large Mill Reels Of Paper

The Challenge

The client approached SPS for help as one tonne mill reels of paper were rolling off the pallet during transit as the strapping was breaking. SPS were more than happy to help and visited site to investigate route cause and offer advice and an improvement plan so the client could ship safely.

The client is transporting mill reels of paper in the UK and Export markets. Samples of the clients strap were taken from both unused reels on site and the straps on the displaced pallet to see if there was any difference in product quality. The friction weld tool that the client had was also inspected and a number of bands were jointed with the tool to determine if the friction tool is providing a good joint. Using a strapping system with an inferior break load, poor joints or too few bands can result in the shedding of the load at any point in the supply chain, leading to a severe injury or even a fatality.

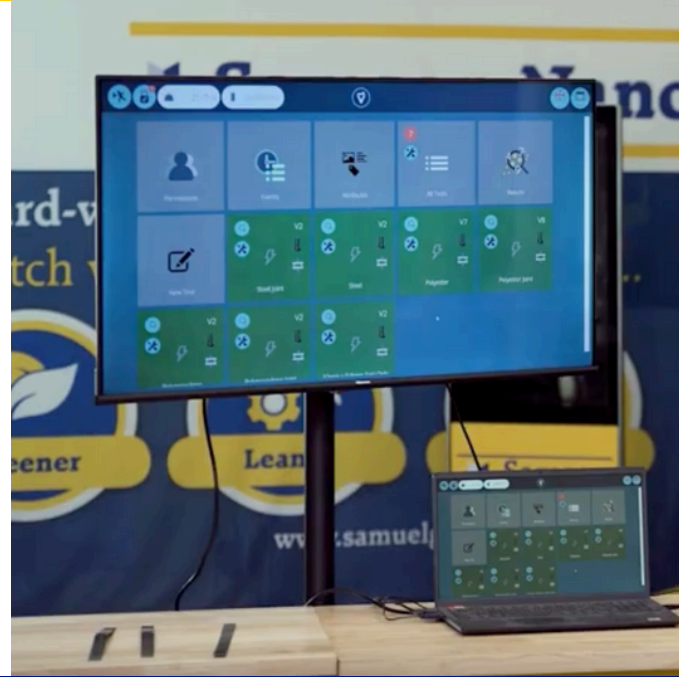
Results

All the strapping samples were tested on the Tensile Testing machine located in the SPS stability innovation centre in Sheffield. After testing every sample, the results were conclusive and confirmed that the strapping tested was not fit for purpose. The 10.5mm strap had a very low break load of only 230kg and by using a 13mm friction weld, could achieve a maximum joint efficiency of only 55%. The joint efficiency was compromised as the strap was too narrow (10.5mm) for the guides of the friction weld tool (13mm), so the joint was poor despite the tool being serviced regularly. In addition, the operator was only applying 2 bands to hold the reel, which gave a total load holding of just over 253kg, which was just not adequate for a one tonne mill reel.



The Safe Solution and Recommendations

SPS were able to confirm a safe solution; Use a 16mm friction weld tool, change (from a 10.5mm wide) to 15.5mm width PET with a break load of 500kg and use 3 x bands to secure the mill reel. With an average joint efficiency of 76% with the SPS PET and friction weld tool combination, this gave a pack calculation of 1140kg. SPS also recommended using chocks or a pulp paper cradle to support the reels, rather than having the mill reel sit directly onto the pallet.



Client Feedback

The client had been offered the 10.5mm 'because it was a good price'. This advice had been given over the phone, as the previous supplier had no experts in the field, so there was no site visit to see what the client was strapping or any potential hazards. SPS were able to respond to the client's request for help, visit site, offer a full tensile testing service, a safe pack recommendation and the client is now reassured with expert knowledge of stability solutions to prevent accidents or injuries.