

Application Data Sheet

Hand-Built Flue Duct Helps To Increase Service Life After Plant Retrofit

Application: Exhaust Ventilation System

Problem: During the retrofit of an aging chemical manufacturing plant, the expansion joints in the exhaust ducting were leaking due to large tears and missing material in the existing belt-type expansion joints. The installed joints had a history of cracking after only a few months of use.



Solution: A Partner Distributor and our Engineering

team reviewed the current expansion joint layout, specs, and upcoming design process changes, and we recommended a hand-built "Flue Duct" style Expansion Joint. After review, it was determined the belt-style expansion joint installed used an incompatible material for the temperature and chemicals present in the exhaust. The frame used a sharp corner design, leading to stress and tearing in the corners during operation. We proposed and agreed that removing the inward angle belt frame and replacing it with a Holz Rubber handbuilt 945 –W- style fixed rubber flange Expansion Joint manufactured with Viton would be the best solution. The proposed Joint style is manufactured using fully molded radius corners and exceeds the expected movement requirements of the system. The Viton material can handle the exhaust temperature and chemical-laden air passing through the system. The design change has increased the service life past two years in a place far exceeding a few months of the original design.