

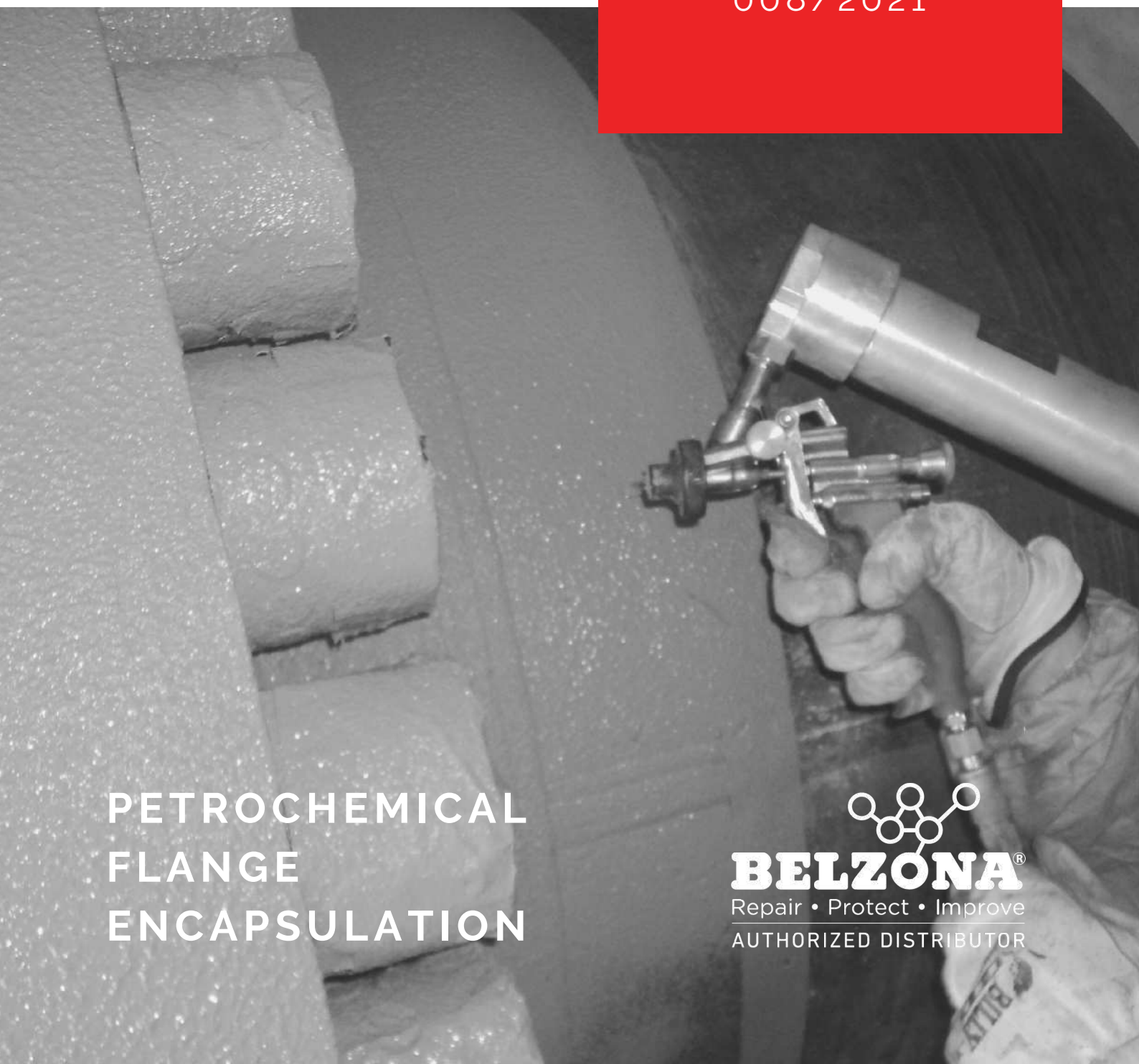
ONTARIO
**KNOW-HOW
IN ACTION**

BELZONA[®]
GREAT LAKES

008/2021

**PETROCHEMICAL
FLANGE
ENCAPSULATION**


BELZONA[®]
Repair • Protect • Improve
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THE PROJECT

FLANGE ENCAPSULATION
OCTOBER, 2017

Over the years, the repair and maintenance industry has employed many different techniques to combat the problem of flange corrosion. Conventional paints, mechanical covers and clamps, polymer tapes, hot-melt thermoplastics, polymer bags with VCIs all offer solutions to protect flanges from corrosion, but they are not without their drawbacks. These techniques can be costly and complicated to install, and can also fail to provide the level of corrosion resistance required to successfully protect flanges and pipework within harsh environments

CORROSION PROTECTION

Customer based in Sarnia, Ontario was having corrosion problems in several flanges of his plant. The protective paint that was used in the past would peel off, exposing the substrate, which lead to corrosion around the flange, studs and nuts.

During shutdown, the maintenance staff was required to recoat the flange, thus they had to purchase new studs, nuts and be required to sandblast before coating. This process was costly, time consuming and did not provide the required level of protection.



THE SOLUTION

Belzona 3412 and 8411 were specified for its corrosion-resistant properties, quick and simple installation and inspection method which can be completed with minimal manpower by the company's own maintenance staff.

Before application of the product, the surface of the flanges was prepared and cleaned with power tools and cleaner degreaser. To seal the gap between the flange faces, a strip of bridging tape was used. Belzona 8411 was then applied to the entire application surface. After, rubber caps were installed over the bolts and nuts.

PEELABLE & RESEALABLE



Belzona 3412 was then mixed and applied using a cartridge spray gun over most of the surface and with a short bristle brush over hard to reach areas. Two coats of dissimilar colors of Belzona 3412 were applied.

Belzona 3412 is a flexible encapsulating membrane, which protects flanges and equipment from moisture ingress, dust and the environment. This product when used in conjunction with Belzona 8411, a release agent/corrosion inhibitor, enables simple inspection by just cutting the system at the flanged joint and peeling it back. The system can also be resealed by simply adding a further layer of Belzona 3412.