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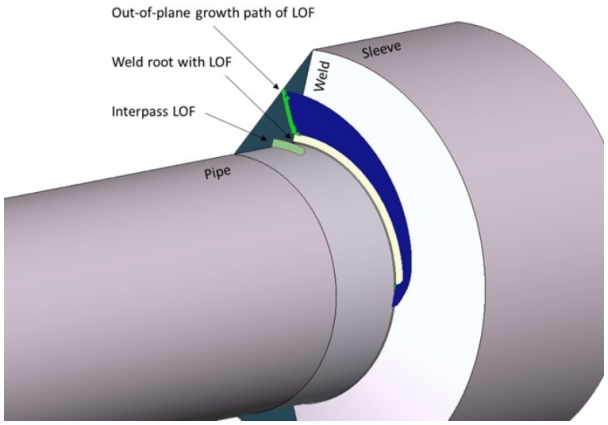
Refit and Repair of Welded Structures and Lift Devices

Whether it is from slow accumulating damage caused by mechanisms such as creep, fatigue and corrosion, or a sudden loss of integrity due to an unforeseen circumstance, welded structures often require refit or repair. Applus+ will provide concepts, work instructions and drawings for refit and repair. Applus+ has experience with tanks, pressure vessels, piping, structural steel, lifting devices across a variety of industries.



THE Applus+ SOLUTION

The first step in any refit and repair scheme is to determine the root cause of the damage. To this end, Applus+ has a variety of potential solutions including simulation and analysis of designs and laboratory based failure analysis. Fitness For Service assessments may also be carried out to determine if repairs are actually necessary, or if the equipment can continue to operate in its curretn condition.

Once the damage mechanisms are understood a refit and repair scheme can be developed. When developing refit and repair schemes, our skilled engineers will take into consideration a large variety of factors including the safety of personnel (both during the repair process and during the ongoing operation of the equipment), required service life and any provincial or federally regulated safety standards, e.g. ASME or API. Considerations which may negatively affect the outcome of welding repair such as distorition and cracking will also be addressed.

Applus+ offers refit and repair advice based on over 60+ combined years of experience in the business. With the help of our inspection teams, we can assist to properly evaluate your problem in the field and determine the most effective way to get you back up and

running. Applus+ provides certification for repaired components that have being returned to their OEM condition, or better. Applus+ also offers FEA and simulation services to determine if a piece of equipment can continue to operate without the need for repair.

Target customers

Entities that utilize lift devices (e.g. cranes), and own assets such as tanks and pressure vessels, must acquire a thorough inspection to identify issues regarding welding structures and other components that may jeopardize their functionality, and most importantly, the safety of operators. Industries that benefit from this form of inspection include construction, energy and industry, among numerous others. This service is required anytime a piece of equipment has suffered damage. This may be slowly accumulated over time by mechanisms such as fatigue, creep or corrosion or may occur quickly due to an accident or failure.

Key customer benefits

Clients will gain numerous benefits from obtaining refit and repair schemes regarding welding structures and lift devices. There are several advantages that our clients will obtain to ensure the longevity of their assets. These are:

- Applus+ will work directly with our inspection team to properly characterise the need for refit and repair and quickly develop repair schemes.
- After inspection, Applus+ will connect clients with dedicated engineering personnel to develop specific repair instructions for the benefit of assets.
- Applus+ offers a variety of state-of-the-art simulation services, through the use of NDT methods and other techniques, that may allow us to extend service life without the need for repair, providing the client many cost savings.