



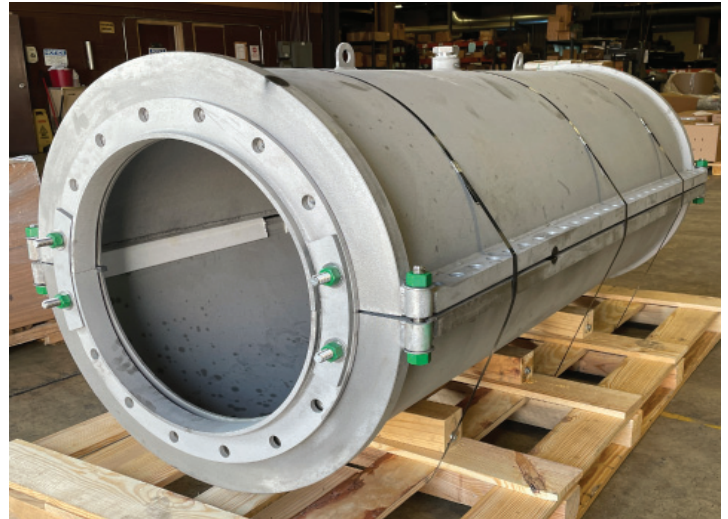
JCM Industries, Inc.

**Fittings & Fabrications
for Repair - Connection - Branching
All Types and Sizes of Pipe**

JCM Industries, Inc.
P.O. Box 1220 - Nash, TX 75569-1220
Office: 903-832-2581, Fax: 903-838-6260
www.jcmindustries.com

Call Toll Free: 800-527-8482
Fax Toll Free: 800-874-9524
Email: sales@jcmindustries.com

**JCM 114 Series
FABRICATED MECHANICAL JOINT
ENCAPSULATION FITTINGS
Permanent Repair
of HIGH DENSITY POLYETHYLENE PIPE
for
Severly Damaged Pipe
Leaking Flanged Connections
Failed Fusion Joints
Full Sections of Damaged Pipe
Over Temporary Repair Units
and others**



JCM 6114 All 316 Stainless Steel Repair Sleeve

JCM Series 114 Mechanical Joint Repair Sleeves are ideal for situations that involve damaged pipelines or leaking pipeline appurtenances. The JCM 114 Series is a unique and versatile fitting that lends itself to be the permanent solution to complicated issues. The JCM 114 Series offers:

No Shutdown or Interruption of Critical Service - by implementing a split fabricated mechanical joint design, the JCM 114 prevents costly down time and service disruption.

True Mechanical Joint Design - heavy fabricated steel body and pusher gland construction prevents the warpage and distortion experienced by repair sleeves using the split steel coupling designs.

Custom Built For Specific Application - this multitalented mechanical joint fitting is built to meet the specific requirements of special applications. Eliminates lost time due to field or factory modifications.

Strong and Lightweight - the 114 sleeves are ideal for installations where strength, weight and continued service are critical. The reduced weight of high strength steel aids in installation and handling as well as minimizing weight load on the pipe.

Available in Three Styles - the 114 MJ Split Repair Sleeve for use on straight runs of pipe and the 114 MJ Bell Repair Sleeve which is fabricated to accommodate the specific dimensions of the coupling or appurtenance to be repaired. The JCM 114 MJ Repair Sleeve can also be fabricated to accommodate two different O.D.'s of pipe.

Optional Materials - the 114 is available in carbon steel with special coatings and fasteners, or is available fabricated of 304 stainless steel (4114) or 316 stainless steel (6114).

Sizes & Configurations - the 114 is available for pipe sizes 4" and larger. Custom design and product submittal for unique or problematic applications provided by JCM Engineering Group.

Presented here are a few of the diverse case studies in which the JCM 114 Series MJ Sleeve was provided as the permanent solution.

High Density Polyethylene Pipe is exceptionally durable and robust - however, upon occasion, fusion for repair is not a viable option. In those situations, JCM Industries offers several products to repair the pipeline. One of the most popular and versatile repair options is an encapsulation sleeve - the JCM 114 Mechanical Joint Repair Sleeve. This sleeve can be adapted to make repairs of straight runs of pipe, over leaking couplings, as a permanent fitting over a temporary repair and many others.

Featured here are a few case study applications that JCM has participated in by providing a custom, engineered encapsulation fitting for the repair of High Density Polyethylene Pipelines.

For more information on the JCM Series 114 Mechanical Joint Repair Fittings, visit www.jcmindustries.com or call 1-800-527-8482 and visit with our Sales Team.

CASE STUDY NO. 1



This application challenged JCM with a leaking electro fusion coupling on 22" HDPE Pipe, JCM submitted the 114 Mechanical Joint Bell Repair Sleeve style sleeve to make the repair.



Shown above, the 114 Bell Repair design has an expanded middle section that accommodates the outside diameter and laying length of the coupling with end flanges that transition down to fit on the outside diameter of the pipe. As a mechanical joint fitting, the 114 has both sidebar gaskets and end gaskets that provide the watertight seal around the leaking coupling.



Above, the mechanical joint followers are installed on the left side of the fitting and technicians finish up the installation by installing and tightening the mechanical joint follower bolts on the right side.



At the completion of the the installation, technicians add to the corrosion resistance of the epoxy coated fitting by wrapping the entire unit in additional protective material.

JCM provided this fitting to the job site in less than 48 hours after receiving the order.

CASE STUDY NO. 2 - Unlike the repair over the leaking electro fusion coupling, this encapsulation fitting was provided as a permanent “standby” repair fitting.

The inspector of this project felt the fused joint may be suspect and to ensure a a leak free system for the future, the pipeline owner decided to have the JCM 114 Mechanical Joint Repair Sleeve for a straight run of pipe installed so in the event of any failure of the fused joint, the 114 was in place - preventing any need for reexcavation of the pipeline in the very deep vault area. The pipe is 42” IPS Sized HDPE.



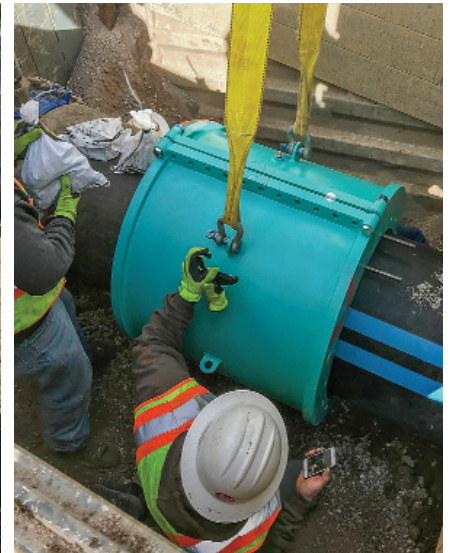
CASE STUDY NO. 3 - A Florida utility district discovered a failure at a butt-fused joint on 36” HDPE Force Sewer Main. As a temporary repair, the utility installed a JCM 102-3600-18 Extended Range Universal Clamp Coupling while a permanent solution was considered. The temporary repair served for four (4) years. This pipeline was considered “critical” and the utility was unable shut the line down. Considering all the parameters, the JCM 114 Bell Repair Sleeve was selected (the Bell Repair design accommodated the encapsulation of the repair clamp) and provided a complete seal of the area with side and end gaskets. To ensure a repair to last the life of the pipeline, the 114 was fabricated of all 316 stainless steel (JCM Model 6114) and the restraint system included was also of all 316 stainless steel.



Due to the curvature of the pipeline, some job-site modifications of the JCM 6114 were performed to ensure the fitting sealed the mechanical joint ends. These field adjustments were possible, as the 6114 is a fabrication rather than a cast iron fitting. After completing the sleeve installation, technicians installed the restraint system on each side of the repair area to prevent axial movement of the pipeline and relieve stress at the damaged area - also preventing additional damage severity.

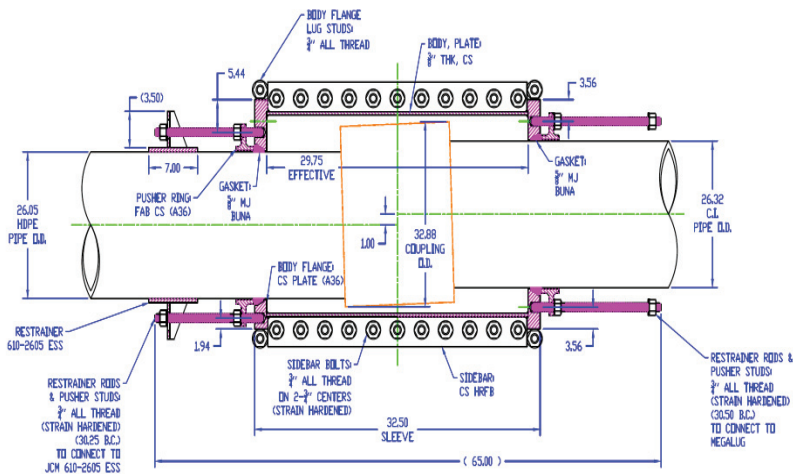


CASE STUDY NO. 4 - A reported leak on Christmas Day was from a 24" bolted coupling joining HDPE to Cast Iron Pipe. This application was installed several years prior to the leak and over time settlement had taken a toll on the connection, causing the pipe to shift and push the coupling beyond it's deflection capability. Several traditional solutions were considered with factors such as out of service, discharge mitigation, limited space and time. Ultimately the encapsulation fitting was determined to be the best course of action as it could be installed while the system was in service, within the limited space of the excavated site and with expedited fabrication delivery was limited to days rather than weeks.



The utility performed a 3D scan of the location, worked from a 3D autocad drawing and provided this information to JCM for the permanent fabricated repair sleeve.

Using this data, JCM engineering team designed a repair fitting that would accommodate the severe offset between the two pipe sections, encapsulate the leaking coupling and provide service for 250PSI working pressure.



Restraint systems for both types of pipe were installed on the 114 to prevent future pipe movement, relieve stress from the vulnerable coupling joint area and stabilize the connection.

For information on these applications or additional information on the JCM 114 Series Mechanical Joint Repair Sleeves, contact JCM Industries at 1-800-527-8482 or 903-832-2581, visit us at www.jcmindustries.com



JCM Industries, Inc.
 P.O. Box 1220
 Nash, TX 75569-1220
www.jcmindustries.com

