



# JCM Industries, Inc.

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

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## **JCM 114 Series FABRICATED MECHANICAL JOINT ENCAPSULATION FITTINGS**

**Permanent Repair**

**for**

**Severly Damaged Pipe**

**Leaking Bell/Spigot Joints**

**Leaking Flanged Connections**

**Failed Fusion Joints & Couplings**

**Full Sections of Damaged Pipe**

**Over Temporary Repair Units**

**and others**



**JCM 114 Mechanical Joint Bell 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.

JCM Industries offers several products to repair pipelines. 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 different pipelines.

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

**CASE STUDY NO. 1 - Leaking HDPE Fused Coupling on 22" Pipe.**



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

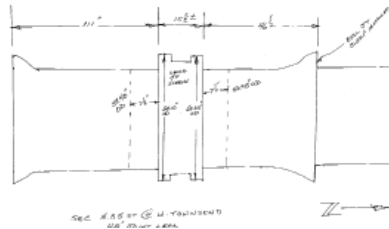
JCM provided this fitting to the job site in less than 48 hours after receiving the order.



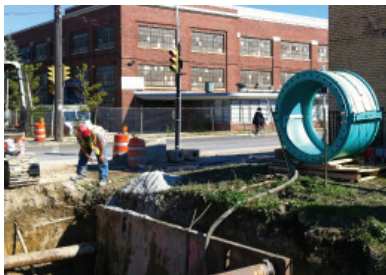
**CASE STUDY NO. 2** - Henderson, North Carolina experienced a 24" leaking Asbestos Cement Pipe Coupling. A previous leaking coupling was repaired by taking the line out of service, cutting out the coupling and installation a replacement piece of pipe. Taking that line out of service was an inconvenience to system users and required time to draining the line and excessive loss of treated water. Using the JCM 114 Mechanical Joint Bell Repair Sleeve reduced labor time, kept the line in service and will last the life of the pipeline. For the complete story of this installation, scan QR code:



**CASE STUDY NO. 3** - A midwestern municipality with a leaking lead joint coupling exposed the location, photographed, measured and submitted a job site sketch for the repair. The data submitted indicated that the coupling maximum diameter varied slightly on each raised lip and pipe diameters on each side of the coupling had a variance of approximately .45 of an inch. The experienced utility supervisor and his team created a "template" of the repair area to ensure that the fabricated fitting would accommodated out of round/flat spots on the pipe diameter.



Upon arrival at the jobsite, the utility supervisor measured and marked the sleeve with location orientation notes for pipe O.D.s to ensure correct placement on the pipe. Pipe preparation including cleaning, buffing the cast iron surface to ensure that the gasket has a debris-free sealing surface. Note the bottom left photo - how the JCM 114 Mechanical Joint Bell Repair Sleeve encapsulates the failed coupling in the body cavity. Side gaskets (set in groove in the top half) and the end mechanical joint gasket configuration provide the water tight seal for the entire repair area.





**CASE STUDY NO. 4** - A Florida municipality was challenged by a leaking 36" cast iron 11.25° mechanical joint fitting. Prior to ordering, city staff excavated the line to determine the source and type of leak and assess the needs for the repair. Staff members made field measurements of the pipe and the fitting. The on-site staff member who recorded the information contracted the COVID-19 virus after the measurements were completed. Alternate staff members provided information to the local distributor & JCM Industries – but as those personnel were not on-site during excavation of the line, there were several difficulties in the connection assembly that was not furnished to the distributor or JCM.

Issues unknown to the manufacturer at the time of order:

1. Outlet/riser to be removed.
2. The very, very short distance between the elbow MJ pusher gland and a pipe bell/spigot connection.
3. Restraint rods completing the installation

Installation Day: excavation and preparation of the repair area, assessment of dimensions and space restraints, removal of riser and repair of hole, and installation of the MJ fitting solved the leak and ensured uninterrupted service for the pipeline.



For a behind the scenes look of fitting fabrication and the complete story of this installation, visit here:



JCM 114 Mechanical Joint Bell Repair Sleeves and Split Repair Sleeves can be customized for various types of applications. Available in carbon steel, all 304 stainless steel and all 316 stainless steel, the JCM 114 is the potential solution to leaking bell/spigot connections, leaking pipe couplings, bolted couplings, permanent repair over temporary repairs and several other pipeline fixtures.

Reduce time and cost of pipe repair, eliminate service interruptions, prevent excessive water/sewage loss, avoid line contamination and block health risks.

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](http://www.jcmindustries.com)



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