



# The Pacific Pipeline

The Monthly Newsletter of Pacific Pump and Power

Rental • Sales • Service • Operations

December 2013

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## HDPE is a Leak Free, Durable Piping System!



### Butt Fusion – The “Leak Free” solution

The natural gas industry adopted polyethylene pipe over 30 years ago and it is still the material of choice for distribution systems across the US and Canada. It has proven to be the long-term answer to the decaying infrastructure problem because of its 50-100 year life, non-corrosion characteristics, ease of installation, low life cycle cost and economical leak-free butt fusion joints.

Now the potable water industry, with its failing infrastructure, is growing in its acceptance of AWWA C-906 polyethylene pipe (HDPE) for the same reasons. The concept of a “Leak Free” system is new to this industry that has grown to accept a 10% to 30% loss of treated water because of leaky joints and corrosion failures in conventional piping materials. In addition, these leaky joints allow contamination into the water lines that we use for drinking water.

An HDPE piping system is “Leak Free” mainly because the pipe joints are butt fused together creating one homogeneous pipeline with no opportunity for leakage at the connection.

Most of the HDPE manufacturers have adopted the Generic Butt Fusion Procedure (Technical Report TR-33) developed by the members of the Plastics Pipe Institute ([www.plasticpipe.org](http://www.plasticpipe.org)). This document, is being drafted to be included in the ASTM standard D2657 (Practice for Heat Fusion Joining of Polyolefin Pipe and Fittings), including the step-by-step procedures for butt fusing polyethylene pipe and it also provides a wide range of parameters that can be used to accomplish this.

Generally, two important details should be considered for fusing polyethylene pipe:

1. Recognize the importance of good fusion equipment and keeping that equipment in good working condition. Well-designed and maintained equipment not only saves the contractor time on the job but also insures that the proper fusion parameters are achievable.
2. Recognize the importance of having trained operators for the fusion equipment. Properly trained operators are more productive and pay attention to the step-by-step procedures recommended to make quality butt fusion joints.

Well-designed / maintained fusion equipment and trained operators make the joining of HDPE a simple and economical task. This is an estimate on the amount of HDPE that can be installed above ground in an (8) hour day using 40' straight lengths of pipe:

4" pipe -- 2,000 - 3000 feet  
12" pipe-- 700 - 1,000 feet  
24" pipe – 520 – 700 feet

With many states now experiencing a water shortage and buying water from adjacent states, it makes sense to use a “Leak-Free” polyethylene system with butt-fused joints as a conservation effort.

Jim Craig, PE  
National Sales Manager  
McElroy Manufacturing, Inc.

On the left you can see that where the pipe is joined there is no joint. The pipe has become one homogeneous pipe that is actually stronger than the virgin pipe. The beads on the joint can be removed using special tooling if desired as it has nothing to do with the joints integrity.

On the right is McElroy's In Field Tensile Tester provides a quick and easy way to qualitatively test fusion joints in the field. The dual reduced section coupon allows for a quick comparison of the integrity of the joint versus the parent pipe. A hand-pump system tests coupons from 2" IPS and larger pipes (up to 5" thick wall).



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Pump Type	Quantity Available	Pump Model and Description
<b>Oahu Yard</b>		
Godwin Dri-Prime CD Series Pumps, High Volume, Medium Head, Large Solids-Handling Capabilities	52 AVAILABLE	<ul style="list-style-type: none"> <li>DPC300 12" Diesel, up to 5000 gpm or up to 115' of head</li> <li>DPC300 12" Electric, up to 4000 gpm or up to 115' of head</li> <li>CD225M 8" Diesel, up to 3100 gpm or up to 183' of head</li> <li>CD225M 8" Electric, up to 3100 gpm or up to 175' of head</li> <li>CD150M 6" Diesel, up to 1700 gpm or up to 160' of head</li> <li>CD103M 4" Diesel, up to 1000 gpm or up to 170' of head</li> <li>CD100M 4" Diesel, up to 750 gpm or up to 115' of head</li> <li>CD80M 3" Diesel, up to 450 gpm or up to 93' of head</li> </ul>
Godwin HL Series, High Head Pumps with Solids-Handling Capabilities	8 AVAILABLE	<ul style="list-style-type: none"> <li>HL150M 6" Diesel, up to 1450 gpm or up to 500' of head</li> <li>HL80M, 3" Diesel, up to 450 gpm or up to 325' of head</li> </ul>
Godwin Heidra Hydraulic Submersibles	6 AVAILABLE	<ul style="list-style-type: none"> <li>HS150VSG 6", Diesel, up to 1600 gpm or up to 160' of head</li> <li>HS150V 6", Diesel, up to 1600 gpm or up to 160' of head</li> <li>HS100TD 4", Diesel, up to 800 gpm or up to 130' of head</li> <li>HS80HH 3", Diesel, up to 420 gpm or up to 125' of head</li> </ul>
Electric Submersibles	21 AVAILABLE	<ul style="list-style-type: none"> <li>Godwin GSP600SV, 8", up to 3650 gpm or up to 82' of head</li> <li>Godwin GSP160HV, 6", up to 1200 gpm or up to 115' of head</li> <li>Godwin GSP55, 4", up to 550 gpm or up to 75' of head</li> <li>Stancor SSS-100, 2" Stainless, 100 gpm or up to 60' of head</li> <li>Stancor SSS-75, 2" Stainless, 80 gpm or up to 40' of head</li> <li>Stancor SV-50, 2" Stainless, 80 gpm or up to 40' of head</li> <li>Flygt Ready 8S, 2" Submersible, 80 gpm or up to 35' of head</li> <li>Flygt 2740 SS sludge series 244HT, 210 gpm or up to 80' of head</li> <li>Flygt 2740 SS drainage series B267 HT, 210 gpm or up to 150' of head</li> </ul>
Wet-Prime Gas Trash Pumps	14 AVAILABLE	<ul style="list-style-type: none"> <li>WT40X 4" up to 430gpm or up to 92' of head</li> <li>Godwin GTP50HX 2" up to 185 gpm or up to 98' of head</li> <li>Godwin GTP80HX, 3" up to 355gpm or up to 90' of head</li> <li>Godwin GTP100HX, 4" up to 430 gpm or up to 92' of head</li> <li>Multiquip QP4TH 4" up to 555 gpm or 92' of head</li> </ul>
Versamatic Diaphragm Pumps	5 AVAILABLE	<ul style="list-style-type: none"> <li>Versamatic Air Operated E3, 3", up to 260 gpm</li> <li>Versamatic Air Operated E2, 2", up to 155 gpm</li> </ul>
Godwin Power Diesel Generator Sets	1 AVAILABLE	<ul style="list-style-type: none"> <li>26kW-R Series, Critically Silenced</li> </ul>
Gasoline Generator Sets	2 AVAILABLE	<ul style="list-style-type: none"> <li>3000 Watt, Portable Honda Quiet Model</li> <li>2000 Watt, Portable Honda Quiet Model</li> </ul>
Godwin Portable Light Towers	3 AVAILABLE	<ul style="list-style-type: none"> <li>GLT 416, 4000 Watts, Coverage of 5-7 acres</li> </ul>
LWT Pit Hog Dredge	1 AVAILABLE	<ul style="list-style-type: none"> <li>40HP Electric Submersible Remote Control Dredge</li> </ul>
Road Ramp Crossings	8 AVAILABLE	<ul style="list-style-type: none"> <li>4", 6", 8" and 12" Road Ramps Crossings</li> </ul>
Air Compressor	1 AVAILABLE	<ul style="list-style-type: none"> <li>Ingersoll Rand 250 CFM air compressor with pneumatic hose reel</li> </ul>
Freight Liner Water Truck	1 AVAILBALE	<ul style="list-style-type: none"> <li>2000 Gallon</li> </ul>
Sewer Equipment Co. Jetter	1 AVAILABLE	<ul style="list-style-type: none"> <li>2000psi 60gpm, Portable Trailer Mounted Jetter</li> </ul>
Hydraulic Hoses	800 FEET	<ul style="list-style-type: none"> <li>¼", ½", ¾" and 1" Hydraulic Hose with Couplers</li> </ul>
Heavy Duty Hoses	8000 FEET	<ul style="list-style-type: none"> <li>2", 3", 4", 6", 8", and 12" Heavy Duty Suction and Discharge Hose Available with Quick Disconnect Fittings</li> </ul>
Bauer Light Weight, Quick Disconnect Pipe	10000 FEET	<ul style="list-style-type: none"> <li>4", 6", 8", and 12" Bauer Light Weight Quick Disconnect Pipe in 10' and 20' Lengths</li> </ul>
Pump Accessories	4000 IN STOCK	<ul style="list-style-type: none"> <li>Bauer and Camlock Fittings from 2-12" Available</li> </ul>
HDPE Pipes and Fittings	2400 FEET	<ul style="list-style-type: none"> <li>18" DR 26 and 18" DR 32.5 HDPE Pipe</li> <li>12" DR11 HDPE Pipe</li> <li>12", 14" 18", 24" HDPE Fittings</li> </ul>
Pump Parts	1200 IN STOCK	<ul style="list-style-type: none"> <li>Common Wear Parts for all Pumps Already in Stock</li> </ul>
Pipe Plugs	37 AVAILABLE	<ul style="list-style-type: none"> <li>4-8", 6", 8-12", 12-18", 18-24", 15-30", 24-36" and 24-42", 24-48", 84" with Protective Sleeves and Poly-Lift Line Inflators</li> </ul>
McElroy Fusion Machines	7 AVAILABLE	<ul style="list-style-type: none"> <li>T500 II fuses 6-20" HDPE, T900 fuses 12-36" HDPE</li> <li>PitBull 26 fuses 2-6" HDPE, 2LC fuses 1/2-2", Pitbull 14 fuses 1-4"</li> </ul>
McElroy Parts	60 In STOCK	<ul style="list-style-type: none"> <li>Assorted parts and inserts</li> </ul>
<b>Maui Yard</b>		
Godwin Dri-Prime CD Series Pumps, High Volume Medium Head, Large Solids-Handling Capabilities	2 AVAILABLE	<ul style="list-style-type: none"> <li>CD150M 6" Diesel, up to 1700 gpm or up to 160' of head</li> </ul>
Bauer Light Weight, Quick Disconnect Pipe	400 FEET	<ul style="list-style-type: none"> <li>6" Bauer Light Weight Quick Disconnect Pipe in 10' and 20' Lengths</li> <li>8" Bauer Light Weight Quick Disconnect Pipe in 10' and 20' Lengths</li> </ul>
Heavy Duty Hoses	40 FEET	<ul style="list-style-type: none"> <li>6" Heavy Duty Suction Hoses Available with Quick Disconnect Fittings</li> </ul>
Road Ramp Crossings	1 AVAILABLE	<ul style="list-style-type: none"> <li>6" Road ramp crossing</li> </ul>
Gasoline Generator Sets	1AVAILABLE	<ul style="list-style-type: none"> <li>2000 Watt, Portable Honda Quiet Model</li> </ul>



The Pacific Pump and Power Team: Arlo, Kristin, Andrew, Jessica, Jeremy, Angelica, Paul, Kamaka, Ka'imi, Eric, Rhussell Joel, A'alona, and Martin where not available for the photo.

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