



The Pacific Pipeline

The Monthly Newsletter of Pacific Pump and Power

October 2013

Rental • Sales • Service • Operations

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High Density Polyethylene Pipe

An assortment of different types of piping is used to transport fluids all over the Hawaiian Islands. More and more we are seeing High Density Polyethylene (HDPE) pipe in Hawaii. Why is this? According to the plastic pipes institute it is because of HDPE's far superior durability. See the below article from Plastics Pipe Institute: ([reference: http://plasticpipe.org/municipal_pipe/potable_water.html](http://plasticpipe.org/municipal_pipe/potable_water.html))

High Density Polyethylene (HDPE) Solid Wall Pipe has been used in Potable Water applications since the '60's, and has been gaining approval and growth in municipalities ever since. HDPE Pipe is specified and/or approved in AWWA C901, AWWA C906, NSF 14, NSF 61 and ASTM D3035. Some distinctive advantages of HDPE pipe that provide important benefits for water applications are listed below:

Durability

1. Heat Fused Joints

- HDPE pipe can be heat fused together to form a joint that is as strong or stronger than the pipe itself and is leak free.
 - This eliminates the potential leak points every 10-20 feet as found with PVC and Ductile Iron bell and spigot connections.
- The Life Cycle Cost of HDPE pipe differs from other pipe materials because the "allowable water leakage" is zero rather than typical leakage rates of 10 to 20% for PVC and Ductile Iron.
- HDPE pipe fused joints are self restraining and costly thrust restraints or thrust blocks are not required.
- HDPE pipe's fused joints simply do not leak, eliminating infiltration and exfiltration problems experienced with alternate pipe joints.

2. Flexible and Fatigue Resistant

- HDPE pipe can be bent to a radius 25 times the nominal pipe diameter (Example: 12" HDPE can be cold formed in the field to a 25ft radius). This can eliminate many fittings required for directional changes in a piping system where fittings and thrust blocks or restraints are required with alternate materials.
- The flexibility of HDPE pressure pipe makes it well suited for dynamic soils including areas prone to earthquake.
- HDPE pressure pipe can accept repetitive pressure surges that significantly exceed the static pressure rating of the pipe.

3. Construction Advantages

- The combination of flexibility and leak free joints allow for unique and cost effective types of installation methods that the rigid PVC and Ductile Iron pipes can't use with bell and spigot connections. These alternate installation methods (Horizontal Directional Drilling, Pipe Bursting, Sliplining, Plow and Plant, Submerged or Floating Pipe, etc.) can save considerable time and money in most potable water applications.
- Polyethylene pipe is produced in straight lengths up to 50 foot long and coiled in diameters up through 6". Coiled lengths over 1000ft are available depending on size providing low cost installations..
- Polyethylene is about one-eighth the density of steel, it does not require the use of heavy lifting equipment for installation.

4. Cost Effective, Long Term and Permanent

- Polyethylene pipe installations are cost effective and have long term cost advantages due to its physical properties, leak free joints and reduced maintenance costs.
- The polyethylene pipe industry estimates a service life for HDPE pipe to conservatively be 50-100 years. This relates to savings in replacement costs for generations to come.

5. Corrosion and Chemical Resistant

- HDPE pipe will not corrode, tuberculate or support biological growth.
- HDPE pipe has superb chemical resistance and is the material of choice in harsh chemical environments
- The advantages of corrosion and chemical resistance over traditional metal pipes are shared by many plastic pipes, but HDPE pipe uniquely combines these attributes with the aforementioned advantages of heat fused joints, flexibility and fatigue resistance.

6. Handling

- It is much easier to handle and install HDPE pipe vs. the heavier, rigid metallic or concrete pipe segments, allowing for huge cost advantages in the construction process.
- Polyethylene pipe is better able to structurally withstand an impact than PVC pipe, especially in cold weather installations when other pipes are more prone to cracks and breaks.

7. Hazen Williams C Factor is 150 and doesn't change over time

- HDPE pipe has a smooth ID that does not corrode or tuberculate and maintains its flow capability over time.
- The C Factor of Ductile Iron pipe is dramatically reduced over time due to corrosion and/or tuberculation.



According to the Federal Highway Administration, utilities spend \$36 billion annually on corrosion protection of pipes. Is your municipality contributing to these expenditures? If the answer is yes, then specify HDPE pipe. It does not corrode or tuberculate, long-life cycle reduces your maintenance budget and increases your billable water.

Pacific Pump & Power is a supporter of specifying HDPE in place of alternatives due to the significantly lower big picture costs. If you are interested in learning more about HDPE or HDPE Fusion call us or email us anytime!

Call today at 672-8198 or visit us at Campbell Industrial: 91-503 Nukuawa Street, Kapolei



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



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

Call today at 672-8198 or visit us at Campbell Industrial: 91-503 Nukuawa Street, Kapolei