Large Diameter Pipe

US Industry Study with Forecasts for 2016 & 2021

Study #2974 | December 2012 | $5100 | 232 pages
# Executive Summary

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- Demographic Trends
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Growth will benefit from the repair and replacement of wastewater infrastructure, as many state and municipal pipe projects that were put on hold during the 2006-2011 period move forward.

**US demand to rise 6.2% annually through 2016**

US demand for large diameter pipe is projected to rise 6.2 percent annually through 2016 to 197 million feet. Growth will benefit from the repair and replacement of wastewater infrastructure, as many pipe projects that were put on hold during the 2006-2011 period due to state and municipal budget concerns move forward. Additionally, the need to expand oil and gas transmission lines, especially near shale plays and other unconventional wells, will spur growth. Furthermore, improvement in manufacturing activity will boost pipe demand in processing applications.

**Concrete, HDPE pipe to be fastest growing types**

Steel and high density polyethylene (HDPE) were the two leading large diameter pipe materials in 2011, each accounting for 31 percent of total demand. Opportunities in the oil and gas industry will spur growth for steel through 2016, as it is the preferred material in both line pipe and oil country tubular goods (OCTG) applications. HDPE will post above average gains as it continues to replace other materials in many applications. For example, corrugated HDPE will continue to replace concrete pipe in many drainage applications, benefiting from its ease of installation and light weight. Concrete will post the most rapid growth through 2016, as the material continues to benefit from its established position in most water markets and its unmatched performance advantages in the largest diameter uses.

**Sewers to stay top market, drainage to grow fastest**

Sewers, which include both storm and sanitary sewers, will continue to be the leading market for large diameter pipe through 2016, accounting for one half of total demand. Gains in large diameter storm sewer pipe will come in large part from the US population migrating toward the South and West regions of the country. Additionally, EPA mandates will provide opportunities for growth, as regulations regarding combined sewer overflows have become more stringent. As a result, many locales will be required to replace combined storm/sanitary sewer systems. The drainage market will experience the most robust growth in large diameter pipe demand through the forecast period, benefiting significantly from a rebound in building construction.

By 2016, oil and gas will be the only major market for large diameter pipe that will have a significantly higher level of demand than 2006 levels. Advances will arise primarily from line pipe applications for shale plays and other unconventional wells. Because the infrastructure surrounding shale wells has not been fully developed, many plays utilize trucks to transport material. Pipelines, which provide a continuous flow of product, are a significantly cheaper option.
MARKETS

Crude Oil — Demand for large diameter oil pipe is forecast to expand at a 6.5 percent annual rate through 2016 to $1.6 billion. Gains will decelerate substantially from the rapid growth between 2001 and 2011, when prices of crude oil rose sharply and, as a result, well completions and pipeline construction activity subsequently increased. Oil prices are expected to moderate and, while some opportunities for large diameter pipe will exist, cyclical trends in exploration and transmission activity will cause demand to decelerate through the forecast period. Despite this, demand for large diameter oil pipe will continue to arise from unconventional sources, such as in shale plays. The Bakken and Utica Shale plays are large sources of crude oil.

Large diameter oil pipe demand is dependent upon crude petroleum prices; drilling and exploratory activity; and pipeline expansion, maintenance, and replacement activity. Line pipe, which is used for the conveyance of petroleum products, is by far the largest application for large diameter oil pipe and will offer the best opportunity for growth.

Demand for large diameter steel oil pipe will climb 6.5 percent per year to $1.5 billion in 2016. Steel’s attributes include durability, pressure resistance, and structural strength. Steel pipe is used as casing, riser, and, to a far greater extent, line pipe. Demand for casing pipe, which is available in diameters up to 30 inches, will benefit from continuing drilling activity, as well as the increasing average well depth. Large diameter riser pipe is utilized in offshore rigs to establish a seal between the top of the wellbore, which is on the ocean floor, and the drilling equipment located above the surface of the water. Riser pipe serves as the conductor of drilling fluid from the well to the vessel. Large diameter line pipe is used to transport oil from the wellhead to distribution, refinery, or utility systems.

### TABLE III-4

**LARGE DIAMETER STORM SEWER PIPE DEMAND BY MATERIAL (million dollars)**

<table>
<thead>
<tr>
<th>Item</th>
<th>2001</th>
<th>2006</th>
<th>2011</th>
<th>2016</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Population (mil persons)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$ pipe/capita</td>
<td>7.3</td>
<td>10.2</td>
<td>7.4</td>
<td>9.4</td>
<td>10.2</td>
</tr>
<tr>
<td>Lg Diameter Storm Sewer Pipe Demand</td>
<td>1655</td>
<td>2467</td>
<td>1902</td>
<td>2552</td>
<td>2965</td>
</tr>
<tr>
<td>Concrete</td>
<td>970</td>
<td>1390</td>
<td>915</td>
<td>1275</td>
<td>1440</td>
</tr>
<tr>
<td>Corrugated Steel</td>
<td>455</td>
<td>690</td>
<td>600</td>
<td>770</td>
<td>900</td>
</tr>
<tr>
<td>HDPE</td>
<td>190</td>
<td>336</td>
<td>329</td>
<td>435</td>
<td>540</td>
</tr>
<tr>
<td>Other</td>
<td>40</td>
<td>51</td>
<td>58</td>
<td>72</td>
<td>85</td>
</tr>
<tr>
<td>$/foot</td>
<td>20</td>
<td>28</td>
<td>31</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>Lg Diameter Sewer Pipe Demand (mil ft)</td>
<td>81.8</td>
<td>88.1</td>
<td>60.7</td>
<td>79.6</td>
<td>88.5</td>
</tr>
<tr>
<td>% storm sewer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lg Diameter Sewer Pipe Demand (mil ft)</td>
<td>98.4</td>
<td>108.7</td>
<td>73.2</td>
<td>98.1</td>
<td>109.0</td>
</tr>
</tbody>
</table>

### CHART V-1

**US LARGE DIAMETER PIPE MARKET SHARE BY COMPANY ($6.9 billion, 2011)**

- JM Eagle — 28.7%
- Nacional — 28.3%
- Weidlinger — 16.5%
- Others — 26.5%
Sample Profile, Table & Forecast

United States Pipe and Foundry Company LLC
3300 1st Avenue North
Birmingham, AL  35222
205-254-7000
http://www.uspipe.com

Sales:  $375 million (FY 2011, as reported by Mueller Water Products Incorporarted)
Employment:  1,400 (estimated)

Key Products:  ductile iron pipe

United States Pipe and Foundry (US Pipe) is a leading producer of ductile iron pipe, restrained joint products, and other related products that are marketed to waterworks distributors, contractors, utilities, municipalities, and other government agencies. The Company was formed in April 2012 when Mueller Water Products Incorporated (Atlanta, Georgia) sold its US Pipe segment to USP Holdings Incorporated, an affiliate of Wynnchurch Capital Limited (Rosemont, Illinois).

The Company participates in the US plastic and competitive pipe market through the manufacture of ductile iron pipe. US Pipe makes ductile iron pipe in diameters ranging from 4 to 64 inches and in lengths of up to 20 feet under such brand names as TYTON JOINT, USIFLEX, TR FLEX, and PROTECTO 401. TYTON JOINT ductile iron pipe utilizes US Pipe’s TYTON gaskets, which are circular rubber gaskets that have a modified bulb shape in the cross section. This shape is designed to provide dependable installation while allowing a watertight seal. This pipe is offered in 4- to 64-inch diameters for water, wastewater, fire protection, and industrial uses. The Company licenses TYTON JOINT pipe and TYTON gaskets to third party manufacturers,

“US demand for large diameter pipe is projected to grow 7.1 percent annually through 2016 to $9.8 billion. Growth will be stimulated by the improved outlook for infrastructure construction activity, as the need to replace aging sewer and water pipe networks increases. Large diameter pipe demand experienced a modest decline during the 2006-2011 period, as the economic recession adversely affected construction spending, manufacturing activity, and state and municipal budgets -- all of which are important indicators of pipe demand. However, ...”
--Section IV, pg. 90

---

TABLE IV-1

<table>
<thead>
<tr>
<th>Item</th>
<th>2001 (million linear feet)</th>
<th>2006 (million linear feet)</th>
<th>2011 (million linear feet)</th>
<th>2016 (million linear feet)</th>
<th>2021 (million linear feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Expenditures (bil 2005$)</td>
<td>165</td>
<td>177</td>
<td>215</td>
<td>193</td>
<td>187</td>
</tr>
<tr>
<td>ft pipe/mil $ construction expends</td>
<td>1056.0</td>
<td>1132.0</td>
<td>675.7</td>
<td>1020.0</td>
<td>1225.0</td>
</tr>
<tr>
<td>Large Diameter Pipe Demand</td>
<td>174.3</td>
<td>200.3</td>
<td>145.6</td>
<td>197.0</td>
<td>229.5</td>
</tr>
<tr>
<td>Steel</td>
<td>53.3</td>
<td>54.3</td>
<td>45.6</td>
<td>58.2</td>
<td>68.7</td>
</tr>
<tr>
<td>HDPE</td>
<td>36.8</td>
<td>53.3</td>
<td>45.0</td>
<td>62.8</td>
<td>77.8</td>
</tr>
<tr>
<td>Concrete</td>
<td>55.5</td>
<td>62.5</td>
<td>34.1</td>
<td>48.6</td>
<td>52.6</td>
</tr>
<tr>
<td>PVC</td>
<td>12.4</td>
<td>12.7</td>
<td>10.1</td>
<td>13.3</td>
<td>15.3</td>
</tr>
<tr>
<td>Ductile Iron</td>
<td>12.8</td>
<td>13.4</td>
<td>6.9</td>
<td>9.4</td>
<td>9.6</td>
</tr>
<tr>
<td>Fiberglass &amp; Other</td>
<td>3.5</td>
<td>4.1</td>
<td>3.9</td>
<td>4.7</td>
<td>5.5</td>
</tr>
</tbody>
</table>

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Other Studies

Oil & Gas Infrastructure
US demand for oil and gas infrastructure equipment will rise 6.3 percent yearly through 2016 to $12.1 billion. The key pipe segment will benefit from construction of new transmission lines and the need for gathering systems at new drilling sites. Compressors will be the fastest growing type, while the Eastern US leads gains by region. This study analyzes the $8.9 billion US oil and gas infrastructure equipment industry, with forecasts for 2016 and 2021 by product, application and US region. The study also evaluates company market share and profiles industry players.

#2922 ................ November 2012 ............... $5100

Plastic & Competitive Pipe
US demand for pipe is expected to grow 6.2 percent per year to $50.1 billion in 2016. Plastic pipe will experience the fastest growth, led by PVC. Concrete and ductile iron pipe will lead gains among other material types. Steel pipe will remain the leading pipe material in value terms, based on its dominance in the oil and gas market. This study analyzes the $37 billion US pipe industry, with forecasts for 2016 and 2021 by market, material and resin. The study evaluates company market share and profiles industry participants.

#2958 ................ October 2012 ............... $3300

World Water Infrastructure Equipment
World demand for water infrastructure equipment will rise 6.5 percent per year to $101.7 billion in 2016. In less developed nations, gains will be prompted by expansion of water supply services. In most developed nations, gains will result from upgrades and repairs to aging sewer and water pipe networks. This study analyzes the $74.2 billion world water supply equipment industry, with forecasts for 2016 and 2021 by product, application, world region and for 22 major countries. The study also evaluates company market share and profiles industry competitors.

#2881 ................ May 2012 .................. $6100

Water & Wastewater Pipe
US demand for water and wastewater pipe is expected to rise 8.2 percent per year to $17.8 billion in 2016. The building construction market will lead gains as it rebounds from recent declines, followed by the municipal market. Plastic will be the fastest-growing pipe material as it continues gaining market share over competing products. This study analyzes the $11.9 billion US water and wastewater pipe industry, with forecasts for 2016 and 2021 by market, application and product. The study also evaluates company market share and profiles industry players.

#2848 ................ February 2012 ................ $4900

World Plastic Pipe
World plastic pipe demand is forecast to increase 7.3 percent annually through 2015. More than two-thirds of all gains will be attributable to the Asia/Pacific region, although the North American market will grow at the same pace as plastic pipe sales in the US recover rapidly. HDPE and smaller-volume plastic pipe will outpace PVC. This study analyzes the 15.8 million metric ton world plastic pipe industry, with forecasts for 2015 and 2020 by resin, world region and for 39 countries. The study also evaluates company market share and profiles industry participants.

#2748 ................ May 2011 .................. $6100