Introduction

DYNAMIC PRESTRESS, a specialist agency in the field of prestressing accredited with ISO 9001 certification, has State-Of-The-Art facility for the production of Double Walled and Single Walled Corrugated HDPE Pipes for a varied range of sizes for use in prestressed concrete structures and for underground services.

We have a well established manufacturing setup for anchorages, HDPE ducts, metallic ducts and equipments upto cable capacity of 1500 Tons. (for 55 T 15 Anchorage system).

The infrastructure also has one of the best production facility for:

a) Neoprene Bearings  
b) POT / PTFE Bearings  
c) Well Sinking Jacks & Lifting Jacks  
d) Void Formers

Our Esteemed Clients are:

- NHAI  - Railways  - MSRDC  - Konkan Railway  - RVNL  - All Contractors  
- NPCIL  - PWD  - CPWD  - Metro Rail Corporation  - DFCC  - BRPNL/UPSBCL

DYNAMIC PRESTRESS is associated with prestressing works of all types of bridges, silos, segmental via-ducts, nuclear containment structures etc. The company has technical expertise both in manufacturing field and execution fields. DYNAMIC PRESTRESS is approved by Ministry of Road Transport & Highways (MORT & H) and Research Designs and Standards Organisation (RDSO) for Bridge.

HDPE Manufacturing Unit at Nashik, Maharashtra

- The ducts are manufactured in diameter range of 50 mm ID to 107mm ID, with varied wall thickness  
- State of the art technique being adopted. The machinery has been imported from Europe  
- In-house testing facility for assuring quality products  
- Experienced technical personnel to handle the production line

Single Walled Corrugated HDPE Sheathing Ducts (SWC) - Application of SWC

Single Walled Corrugated (SWC) Sheathing Ducts are widely used as sheathing duct for insulating pre-stressing strands / cables, in construction of Highways, Railway Bridges, Flyovers, Offshore Platforms, Viaducts, Buildings, Nuclear Containment Structures, Underpasses, etc.

Compatibility of Pipe Sizes for Anchorage Components

<table>
<thead>
<tr>
<th>Size OD / ID (mm)</th>
<th>Nominal OD (mm)</th>
<th>Nominal ID (mm)</th>
<th>Anchorages System</th>
</tr>
</thead>
<tbody>
<tr>
<td>63 / 51</td>
<td>63</td>
<td>51</td>
<td>7DP13 / 4DP15</td>
</tr>
<tr>
<td>90 / 76</td>
<td>90</td>
<td>76</td>
<td>12DP13 / 7DP15</td>
</tr>
<tr>
<td>98 / 84</td>
<td>98</td>
<td>84</td>
<td>19DP13 / 12DP15</td>
</tr>
<tr>
<td>120 / 103</td>
<td>120</td>
<td>103</td>
<td>19DP15</td>
</tr>
<tr>
<td>127 / 107</td>
<td>124</td>
<td>107</td>
<td>19DP15 / 27DP13</td>
</tr>
</tbody>
</table>

Note - The ducts can be supplied with wall thickness of 2.3mm/3mm ± 0.3mm
Colors - Available as per customer’s choice

Manufacturing:

- Manufactured on highly sophisticated machine, imported from Europe, having microprocessor control system to provide better quality with uniform wall thickness.

Advantages of SWC are:

- Enhances fatigue life of tendons  
- Speedy installation, Water Tightness  
- Friction & wobble co-efficient being low, compared with metallic sheathing there is saving of pre-stressing wires  
- Joining is easy and number of joints can be reduced, as it is available in continuous length coils  
- Chemically inert  
- Environmental friendly  
- High stiffness and also high flexibility  
- Very good bond between concrete & sheath as well as between grout and sheath  
- Good corrosion protection  
- Good compression strength as well as impact resistance
The product conforms to:
- FIB Bulletin NO. 7
- IRC Specification
- NPCIL Specifications
- Addendum and Corrigendum IRS Slip No. 6, Railway Concrete Bridge Code 1957

Apart from the raw material tests as per the codal requirements, following routine tests on finished products are also performed in the factory prior to dispatch.

a) Workability Test
b) Transverse load rating test
c) Tension load test
d) Water loss test

The SWC pipe produced by DYNAMIC PRESTRESS meets the codal requirements in terms of Bond Length test and Wear Resistance test. The field results of stressing activity pertaining to force and elongation values also confirm that the co-efficient of friction (μ), and wobble co-efficient (k) of H.T.Strand with DYNAMIC HDPE pipe, matches with the codal and design values.

Methods of Joining the pieces (bar) or sheath can be joined by following methods:
- Butt Welding
- Heat Shrink Coupler
- Snap fit Coupler
- Split Coupler

Double Walled Corrugated HDPE Sheathing Ducts (DWC)
DYNAMIC Double Walled Corrugated (DWC) Pipes are designed for cost effective solution for replacement of GI, RCC and PVC pipes in Fibre Optic and Electric cable networks. Manufactured from rugged High Density Polyethylene (HDPE), this pipe has unique features, while making it lightweight to give excellent mechanical properties like high ring stiffness and better impact strength. The smoother inner wall facilitates easy insertion of micro-duct cables. Thus, these pipes have the ability to withstand heavy external loads when properly buried underground and back filled. These pipes are conforming to IS14930 (Part i & ii), BSNL GR/DWC-34/04, BS En50086 and IEC-61380 (Part ii & iv) standards.

Range of Products
- The standard sizes readily available are 63/51mm, 90/75, 120/103, 124/107
- Shortly also introducing sizes - 50/38mm, 77/63 mm, 180/152 mm & 200 / 175 mm
- Colours - Available as per Customer's choice
- Anti Rodent and Non-Flame Propagating properties
- Half split pipes also available for already laid pipes for cables protection

Quality Control:
Quality Control starts from procurement of raw material. Each batch is tested for carbon melt flow index, density and other parameters specified by relevant codes / standards / recommendations
Each production lot is subjected to stringent quality checks viz., dimensional accuracy, carbon black, density, lateral load resistance, longitudinal load resistance, flexibility, leak tightness of sheath as well as joint and flexural behaviour
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