Plastics Pipe Institute
The Voice of an Industry.

POWER & COMMUNICATIONS DIVISION

September 10 2021

New: Safe Pull Strength Calculations For Conduit

PPI's Power & Communications Division has released a new Technical Note to assist conduit installers in calculating the safe pulling loads to avoid damaging HDPE conduit.

PPI TN-63 ***Safe Pull Strength Calculations For Conduit: including Derating Factors*** provides not only the equations used to calculated the Safe Pull Strength (SPS) for HDPE conduit but easy-reference tables of pre-calculated SPS values for typical industry HDPE conduit diameters and wall thickness types. Guidance is also provided on how to derate the Safe Pull Strength for elevated temperature installation and time under tension considerations.

If the Safe Pull Strength is exceeded during installation, the conduit may permanently deform at some location along its length. This "necking down" may create an obstruction within the conduit such that when the cable is later pulled into place, it can be blocked from passing through this section. Knowing the Safe Pull Strength will protect the conduit during installation and the investment in the installation.

Installers can quickly look-up the Safe Pull Strength for the conduit they are using from the tables, derating it for actual ambient temperature conditions and the time under tension, for use with an in-line tensiometer or in selecting the breakaway link with the correct rating. The SPS values already include the appropriate safety factor.

TN-63 is applicable to any pulled into place installation, including open trench and Horizontal Directional Drilling (HDD) methods. Tables of SPS values are provided for industry standard DR and Schedule wall types, up to 6 inches in diameter. An explanation of the behavior of conduit under load is provided and guidance on installation considerations is included.

The new TN is available at https://plasticpipe.org/pdf/tn-63-2021.pdf.

BOOKMARK IT TODAY!

https://plasticpipe.org/PowerCommunications

Distributed by The Plastics Pipe Institute, Power & Communications Division.

© 2021 Plastics Pipe Institute