Designing a new Inline Insulated Piercing Trough Connector for conductor cross-sections 1.5 to 25 mm^2.

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Enexis is one of the three biggest Distribution Network Operators in the Netherlands, having a LV-network of about 90.000 km cable length.

Working under conditions where low voltage cables are de-energized during installation of trough- and branch joint is less tolerated by customers than in the previous era. This because our economy has become more and more dependent of an uninterrupted power supply. Working under tension is also more tolerated by safety regulators as long the strict safety requirements are met.

Regarding to these safety requirements Enexis experienced a lack with respect to the availability of the right through connectors. The currently available insulated piercing connectors e.g. require an overlap of the conductors at the installation which, according to Enexis’ mechanics, is unsuitable at e.g. the disconnection and reconnection of defaulters.

Because manufacturers didn’t self-started new developments after several requests of Enexis, Enexis came up with the idea of tendering in a “Design Contest” for an Insulated Piercing Connector to give manufacturers in the world market of connectors this development push. This is a way of tendering within the European Tendering Regulation that in the energy business was never used for product development before. This type of tendering however is well known for tendering architecture and buildings.

This paper covers the reasons for, the process during, and the results of this design-contest-tender that was mainly carried out for and by the mechanics of Enexis, in collaboration with the departments of Asset Management, Innovation and Purchasing.

Enexis challenged the market to come up with a solution for a problem that all the Dutch DNO’s are facing. Not only the mechanics are extremely satisfied with the results and their participation in the process, but also the participating manufacturers were laudatory: “The approach Enexis is taking to product development is a breath of fresh in this industry. At last, a major utility has recognised that there are significant risks for manufacturers in the development of specialized network products that may, even if successful, have only a limited niche market. I would energetically recommend other public utilities adopt this approach.”’

This innovative and legal approach of Enexis at product development also was recognized by the “Foundation for the Forward Development of Procurement” by awarding the “Dutch Sourcing Award 2014” to Enexis in the category “Step Change”.

Key words:

Insulated Piercing Connector; Product development; Collaboration; Low Voltage Accessories; European tendering.