

# 80 YEAR LIFESPAN

## Using materials for the future

For a number of years, BYSTRUP has been building up a data bank of new materials, their characteristics and resistance in various environments.

This knowledge, combined with advanced design, allows for a symbiosis between form and material that is of utmost importance in selecting the optimal material for new pylons.

**Choosing materials with longer lifespans reduces the overall cost of a power line. It limits the environmental impact of production and of the disposal of materials.**

When selecting materials for a specific transmission line it is essential to consider the local terrain and climatic conditions. Materials used must be appropriate to their environment and allow for feasible construction methods.



*Testing samples of materials enables a useful comparison of various coating systems and materials. It is important to study closely how they perform. This is one of the reasons for building mock-ups.*



*As part of the process, two prototypes of the Eagle Pylon were made to perform mechanical tests and to assess the visual appearance. One was made of weathering steel with stainless steel cross arms; the other was made of galvanised steel.*

At BYSTRUP we focus on materials with high corrosion resistance and low degradation to prolong lifespan.

These key attributes are offered by the following materials:

- Hot-Dip Galvanised Steel
- Stainless Steel
- Weathering Steel
- Concrete
- Composite Material

From a sustainability point of view, metals in their purest form are preferable, especially those with a long lifespan as well as colours and textures that blend well into the natural environment.

In collaboration with the client, the best application of the material is ensured for each case. Transportation, maintenance, and energy cost savings can be maximized through the optimal material choice, while also providing the best possible aesthetic solution.