

## Progress control in the context of the project management for the execution of a 320kV HVDC land cable project - DoIWin 2

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Progress control is an important management procedure for projects in the execution phase. It helps to clarify many aspects for management decisions in order to reduce or avoid extra costs and time. We have introduced a new progress control method to the installation of a 320kV HVDC land cable project, which belongs to DoIWin 2 cluster connection scope. ABB was responsible for the turnkey management as a general contractor. The main part of the land cable project installation management was delivered starting in early April 2014 and consisted of approx. 81 km remaining cable route (type extruded DC 2400 mm<sup>2</sup> Al - see Figure 1) divided into 103 single sections of approx. 800 meters length and 102 joint bays, respectively 204 joints (prefabricated one-piece type), where each fourth joint was used as earth point. In addition 27 sections were situated in bird protection areas and must be executed within two months in order to not exceed the project deadline at the end of August 2014.

The paper describes the implementation of a progress control method in mainly two phases: planning phase and execution phase. The phases were specially developed to comprise all site activity representation systematical and reliable. Using this methodology it was possible to plan different time schedules, compare these with the actual execution and report in order to inform and reduce the reaction time between all project stakeholders, as shown in the Figure 2.

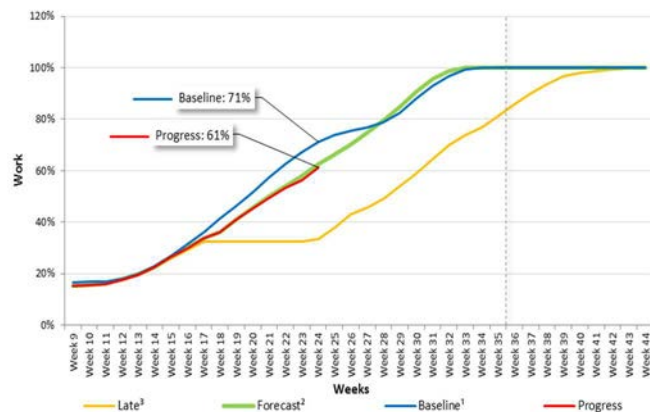


Fig. 1: ABB HVDC cable 2400 mm<sup>2</sup> Al

Fig. 2: S-Curve report of the land cable installation

This procedure ensured to deliver the identification of delay causes and their quantification easier and faster, which permitted a more useful implementation of countermeasures even during the project execution. Consequently the project was after five months of intensive work completed successfully and commissioned with the required DC voltage test (according to CIGRE TB No. 219) and DC overshath test (according to IEC 60229,5). As a result the project achieved a very fast land cable system installation completion. In this context the progress control methodology was shown to be essential for this project configuration and its result.