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Rectification of submarine cables of Croatian 110 kV cross-island connection

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Abstract

After 1991, power supply in the south of Croatia was very critical due to isolation of 400 kV, 220 kV and 110 kV connections from remaining power system and no possibility to repair the transmission lines damaged.

A decision was made to build a 110 kV cross-island connection. Due to time shortage, investigation of submarine cable laying was not thorough enough so after cable laying (4 cable connections) their position was surveyed. On many places cables were not lying properly at the sea bottom so the rectification was required.

Based on the Rectification Plan, the works were executed in 1996. They are supported with films, photos and other records.

Resume

Après 1991, la situation de l'énergie dans le sud du littoral croate était critique à cause de l'interruption de liaison entre 400 kV, 220 kV et 110 kV et le reste des systèmes et l'impossibilité de réparer les lignes de transmission endommagées.

On a pris décision de construire une connexion insulaire 110 kV. Vu l'urgence, les investigations sous-marines précédant la pose de câble n'ont pas été exécutées de manière satisfaisante d'où la nécessité de photographier les câbles posés (4 connexions de câble). On a constaté qu'en plusieurs endroits câbles n'étaient pas emplaces correctement, et on a dû rectifier leurs positions.

Travaux rectification ont été réalisés en 1996 sur base d'une étude détaillée. Chaque intervention sur les câbles fut dûment vérifiée par des photos correspondantes.

INTRODUCTION

Power system of NW and SE coastal area of Croatia was cut off at the beginning of war in 1991. Transmission lines of 400, 220 and 110 kV that connected these two parts of the system were

seriously damaged. Some parts of the system were in the occupied area and could be neither repaired nor put in service. Coastal area of Dalmatia experienced serious electricity reduction during dry season.

In addition to emergency construction of some 100 MW Diesel power plants, the problem was solved by construction of 110 kV cross-island connection already included in earlier Plan and partly implemented.

110 kV cross-island connection connects 400/220/110 kV Melina substation in NW part with 220/110 kV Bilice substation in SE part of the power system.

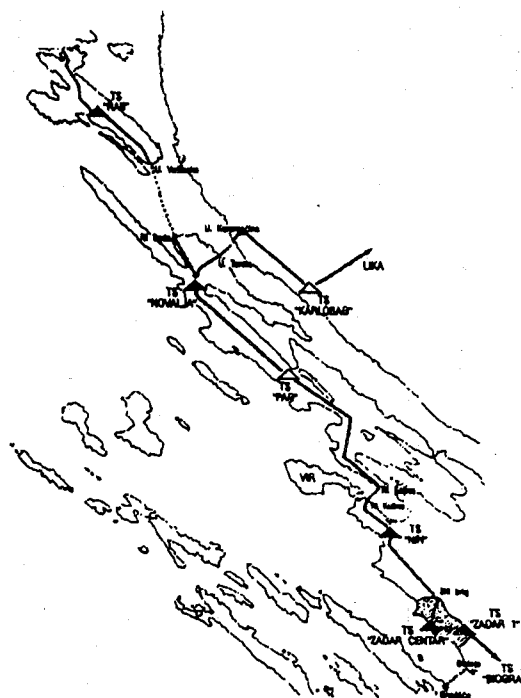


Fig. 1 110 kV Cross-island Connection