Regional Railway Toluca –Valle de Mexico

SENER XTRANSPORTATION / XRAIL MAINLINE / XINTERCITY & COMMUTER RAIL / MEXICO

REGIONAL RAILWAY TOLUCA –VALLE DE MEXICO

Cliente: Secretaría de Comunicaciones y Transportes - SCT (Mexican Transport & Communications Secretary)

País: Mexico

The Toluca – México City intercity train will connect the metropolitan area of Toluca with Mexico City. The project is framed within the Government's National Plan for Infrastructure. Once operational towards the end of 2017, it will provide service to over 300,000 passengers a day, thus demand is expected to increase bringing the daily number of passengers up to 500,000 by the year 2047.

Sener was chosen to carry out the final preliminary design for the line. It has now been awarded the contract for the corresponding detailed design. This new contract is one of Sener's largest in the rail sector. It will be an integral work in which Sener develops all the tasks required for the definition of the construction project, as well as commissioning and start up, of the whole line.

Among these tasks there are previous studies to the execution project such as the definition of the

operational model and technological solution, simulations of the network in operation, as well as all the studies necessary for the line structural definition; among them there are topographic and cartographic works, route studies, viaduct and tunnels calculations, geotechnical research and studies on hydrology and drainage, architecture, structural and station systems definition projects, service areas and storage areas projects, studies on environmental mitigation, urban studies, as well as studies on interfaces, on RAM and Safety, and on rail and electromagnetic facilities, as well as on the characteristics of the rolling stock. All of these studies will serve as the bedrock in the execution of the line Toluca –Mexico DF.

- Characteristics:
- The mountainous terrain and environmental conditions in which this network is being built present a major challenge; the result is a design where 92% of the track is either in tunnels or on viaducts. Altogether, the 57.8 km of the route comprises almost 49 km of viaducts and a 4.7 km twin tunnel with cross-tunnel connections every 240 m.
- The main characteristics are: a design speed of up to 160 kmph; 25,000 Vca; international gauge track; exclusively passenger traffic; and a journey time of 39 minutes that represents an average speed of 90 kmph including stops.
- This compares favorably to the highway, which averages 55 minutes by car and 2.5 hours by bus. Besides, it will have a ERTMS (European Rail Traffic Management System) in level 2 signaling system, and an additional Assistance To Operation (ATO) system.
- The line will have six stations: Zinacantepec, Terminal de Autobuses, Metepec, Lerma, Santa Fe, and Observatorio — all of them at viaducts.
- Furthermore, the project encompasses the definition of the following systems: track, catenaries, traction substations and all of the intercity train systems, including equipment for signaling, ticketing and telecommunications in stations, service areas and storage areas, as well as rolling stock.