



New passengers terminal (TPS-3) of Guarulhos International Airport (Sao Paolo)

Luis MONTERO

BSc Civil Engineer

TYPSA

Madrid, SPAIN

ljmontero@typsa.es

Álvaro DEL CUVILLO

MSc Civil Engineer

TYPSA

Madrid, SPAIN

adelcuvillo@typsa.es

Jesús GONZÁLEZ

MSc Civil Engineer

TYPSA

Madrid, SPAIN

jgmuñoz@typsa.es

Natalia ALONSO

BSc Civil Engineer

TYPSA

Madrid, SPAIN

nalonso@typsa.es

Summary

This paper discusses the structural analysis and the design processes of the new passengers terminal of the International Guarulhos Airport.

Both processes, the detailed design and the construction works, were executed simultaneously due to the deadline was a short period of ten months.

A rigid joint precast structure was designed in order to adjust the work programme to the available execution period. The structural system was composed of pre-stressed beams and precast columns. A steel structure cover was designed with maximum spans of 36 m long.

Keywords: airport, fast-track, precast building, pre-stressing, precast-fixed joints.

1. Introduction

Guarulhos International Airport needs to be expanded for the two following reasons: the heavy air traffic supported, and the organization of great events as the World Cup in 2014 and the Olympic Games in 2016.

In February 2012 the Civil Aviation National Agency of Brazil (ANAC) decided to contract this airport expansion to the companies group integrated by INVEPAR (Brazilian investment fund) and ACSA (South African airports operator). The final design was adjudicated to TYPSA Group (Técnica y proyectos S.A.) in June 2012.

TYPSA Group has realized the final design of this huge airport expansion, with the collaboration of the Brazilian branch (Engecorps) and the specialist teams of the headquarters office in Madrid. The most important activities have been:

New passengers terminal (TPS-3) building. Over 200.000 square meters constructed.

Ancillary buildings such as car park buildings (329.000m²), an energy-centre, a new heliport...

Civil constructions as airplanes platforms, secondary airplane roads, general drainage, connexion tunnels for passengers, merchandises and facilities, pedestrian bridges...