

Chapter 7

2E Terminal at Roissy-Charles de Gaulle Airport

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This chapter presents the forensic investigations conducted after the partial collapse of the jetty of the 2E terminal at Roissy-Charles de Gaulle Airport near Paris that occurred in May 2004. The primary failure mechanism decided upon by the experts is the punching of the shell caused by steel struts in conjunction with the bending rupture of one of the solid arch elements of the shell. This mechanism was then followed by a shift of the shell from its supports and its fall on the tarmac.

After a detailed description of this complex structure, the chapter relates the results of the investigations conducted by the administrative commission set up by the Transportation Ministry, the different courts of law, and SETEC engineering company. It then draws the lessons learnt from the collapse and presents the reconstruction of the new jetty opened in the spring of 2008.

7.1 Introduction

The construction of the 2E terminal was launched by Aéroports de Paris (ADP) in 1999 and the terminal was opened to the public in June 2003. It comprises 3 buildings (Figure 7.1):

- The main building, that has 8 levels, including 4 in the basement, which hosts the arrival and departure halls, the baggage sorting, and technical rooms.
- The boarding jetty that allows the docking of 18 planes, which is parallel to the main building and has a circular arc shape.
- An isthmus which ensures the junction between the two buildings and which houses the police checkpoints, shops, and offices.

The boarding jetty is a 650 m long nave and is made up of a succession of ten shells of a common length of 68 m: a central shell (n° 145), two shells adjacent to the isthmus (n° 144 to the west, and n° 146 to the east), five standard shells (2 to the west and 3 to the east) and two end shells (Figure 7.2).