

THE MARVEL OF ENGINEERING, DESIGN & FUNCTION

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## Abstract

The Kingdom of Saudi Arabia (KSA) has a long tradition of civil aviation that stretches back to over 70 years. King Abdulaziz international Airport is the crucial business airport and the largest airport in KSA. While it was originally opened for service in 1981, the airport was subjected to a grand expansion project in 2006. The project is currently scheduled for completion in 2035.Trust Pro Contracting was appointed by General Authority of Civil Aviation (GACA) – to install Hilti firestop material and Promatc material. Our team accomplished the work within a challenging timeline of 12months. The guality of our work highlights our specialized expertise in fire protection services.

## **About The Project**

## Location Jeddah

**Contractor appointed by the General Authority of Civil Aviation (GACA)** Saudi Binladin Group (SBG)

Sub-contractor appointed by Saudi Binladin Group (SBG) for installation of fire stop and boards systems Trust Pro Contracting



## King Abdulaziz International Airport (KAIA), Jeddah

Saudi Arabia is rapidly seeking to meet increasing demands from religious tourism to the holy city of Mecca. Approximately 2.5 million people visit Mecca during the Hajj period alone, and the figure is projected to rise to 4 million in the next few years. Being the leading airport, commercial centre and the entry point for pilgrims to Mecca and Madina, King Abdulaziz International Airport is at the forefront of the transformation process in KSA. The KAIA expansion project is the landmark of economic development in KSA. Enhancing the status of Jeddah as an international hub, the airport looks forward to provide its passengers, tenants, and operators with the highest quality facilities. The project comprises of three-stage development that started since 2006 and would be in progress till 2035. The project is ultimately designed to increase the airport's yearly capacity from 13 million to 80 million passengers.



#### **Overall Objectives of the Project**

- To become an intermodal hub to promote the economic spirit of the kingdom

- To support the national air transportation system and enhance service as the main gateway to the region

- To become a financially independent, highly strategic business unit

- To achieve the best practices from the private sector
- To earn the position of an international hub for Jeddah
- To corporatize airport assets
- To effectively outsource and manage operations
- To develop best-in-class non-aeronautical business



# **Sites Covered**

- KAIA Main building Zones A, B, C, D and H
- Transmitter site
- Temporary GSE maintenance facility
- Saudi Airline MCC
- APM depot/maintenance
- Meteorological observation building
- Crisis management center
- Radio center 1
- Radio center 2
- Radio center 3
- Radio Center 4

# **Joints Addressed**

- Head of wall civil joints

# - Penetration fire stop work

# **Material Used**

- Promat PROMASEAL fire stopping materials
- Firestop joint spray CFS-SP WB
- Fs joint filler CP 606
- FIRESTOP CP675Components of fire-resistive joint systems specified by the specified manufacturer and approved by the qualified testing or listing agency - including primers and foaming materials required to install fill materials and maintain the standard ratings

- Metal components - hot-dip galvanized steel or stainless steel

# Requirement

- Mobilization and demobilization of all the necessary equipment and specialist manpower
- Site supervision and coordination between contractor and consultant
- Providing suitable masking to avoid damages to surroundings
- Supply and application of suitable backing material Rockwool
- Maintenance of regular quality control records, daily reports and method statements that we followed





#### **Materials Used**

PROMAT fire-rated PROMATECT-H boards (9mm and 12mm thickness)

#### **Total Area Covered**

29, 430 sq. meters

## Requirement

- Installation of PROMAT fire-rated PROMATECT-H boards (12mm thickness)

- Installation of cover strips as per the approval

- Installation of bottom layer PROMAT fire-rated PROMATECT-H boards (9mm thickness)

- Lighting, ducts, electrical, etc. opening

- Designing an adequate supporting fire protection box so as to prevent spreading of fire

- Site supervision and coordination between contractor and consultant

- Providing suitable masking to avoid damages to surroundings

#### **Execution of the Project**

The project involved designing a new passenger terminal (640,000 sq. meters) and associated buildings in order to increase the airport's passenger accommodating capacity to a large extent. It was an extremely large scale project for us and we had to customize our solutions to meet the requirements of various cases within the Airport. Trust Pro Contracting used the advance technology while installing fire boards, which allowed us to optimize the operation. Instead of employing 100workers to do it, we accomplished the work with only 30 expert workers. This is the biggest fire stop projects in KSA and the solution we developed for KAIA was permanent. Our team completed the work within a timeline as short as 18 months, which is an achievement considering the size of the project. We specialize in providing custom fire stop materials for various penetrations and joints based on the project requirement. Moreover, fire stop and fire board system were provided by highly skilled resources, which are guaranteed to sustain without failure or damage deflection movement of overlaying structural slab or member. Our team carried out all the works in the highest workmanship quality in complete conformity with shop drawing and desired specifications, to the satisfaction of the consultant, contractor as well as the customer.



# Challenges Encountered during the Execution of the Project

- The biggest challenge was that KAIA is one of the oldest and busiest airports in KSA, serving four main cities of the Kingdom including the holy cities Mecca and Madina

- Millions come to Haj every year, and the expansion project aims to meet increasing demands of the rising number of passengers predicted in future

- The project size being huge, the time frame given to us was much shorter – 18 months. However, we took the challenge and delivered exceptional quality work contributing to one of the most important factors at KAIA i.e. fire protection and human safety



To know how we can help you with passive fire protection solution, feel free to get in touch with us! Mobile: 966 (50) 749 7561 Telephone: +966 12 6636293 Email: info@tpcontracting.com