

Roof Panelized Alteration and Access Plan for Buildings

The Building Roof Panelized Alteration and Access Plan is a scheme to provide access through the roof of a building housing a recovery boiler that was scheduled for rebuilding. The plan originated in the BE&K home office when it was recognized that early, safe roof access was needed to make 162 individual economizer lifts and 112 individual superheater/screen lifts. To shorten the duration of the outage, it was decided to engineer modularized components for the economizer and superheater. This reduced the economizer lifts to 40 and the superheater lifts to 16, but required a large roof opening.

The existing roof was removed, providing a 36 foot by 70 foot opening which was then covered with seven removable panels and a pedestal crane platform. The removable panels, that can be replaced should rain begin, allowed early roof removal and new steel modifications while protecting the boiler during rainy periods. A parapet wall was built around the opening as a safety measure to stop both personnel and material debris from falling into the work area below. To ensure watertightness, the parapet walls were waterproofed and corrugated metal added to the roof panels. Rubber laps covered the panel seams and the roof was sloped for drainage. With the installation of the removable and replaceable covers, it was possible to remove the roof and existing roof steel before the equipment was shut down. Because crane operators could not see the work being performed on top of the 200 foot tall building and the crane blocks were large, a crane platform, supported by the existing building steel, and a 15 ton electric crane were incorporated into the roof opening design. Handrails, a work platform, and an access stairway protected the crane operator. The roof alteration was intended to be temporary, but because of its advantages it has been permanently retained for reuse on future outages.

Contact: David Duplissey
Organization: BE&K
Address: 2000 International Park
City: Birmingham
State/Province: AL
Postal Code: 35243
Country: USA
Phone No: 205-972-6000
FAX: 205-972-6651
URL:
Email: