

Disaster Relief Center in Kyoto University of Art and Design



Year: 2013

Location: Japan

Program: Education

Status: Completed

Type: New-built

Structure: Paper Tube Structure

At Kyoto University of Art & Design, a temporary studio of 'Paper Structure' was constructed once again by the students themselves. In considering possible relocation of this structure in the future, the steel joints at both ends of the paper tubes are fixed with post-tensioned steel rods. The rigidity of the arch surface is achieved with 2.2m x 1.2m paper tube grids and structural plywood. Above the plywood is styrofoam insulation with a waterproofing membrane. Circular cutouts are provided in the plywood to allow natural light to filter through the styrofoam insulation, and into the space below. Furthermore, during construction, the students are able to fix the plywood above through the cutouts using temporary scaffolding below, without having to actually climb on the roof. To ensure the safety of the students, a design criteria was established that emphasized safe construction means and methods through limited use of heavy machinery and manageable material sizes, and standardized details.