CONCRETE CORE ACTIVATION

Suspended ceilings have been avoided and instead the building service installations are located in the floor or in the concrete ceilings. The pipes in the concrete ceilings that carry supply air lead to a concrete core activation, meaning that the building does not need to be climate-controlled. Supply air enters the concrete ceiling at a temperature of approx. 14°C. By absorbing heat from the ceilings, this air prevents excessively high temperatures from occurring, and is warmed up to room temperature in the process. The only climate-controlled areas are the data processing centre and the archive rooms on the 6th floor, due to the high number of historical collections stored there. These are also located in the centre of the building so that the impact of the ambient temperature remains as low as possible.

OPTIMUM LIGHT CONDITIONS

The glass ceiling above the reading terraces and the arrangement of workspaces on the facades allows for the best possible use of natural light. Depending on the level of natural light, individual lighting circuits can be incrementally dimmed as needed according to the depth of the room, which helps to reduce electricity consumption. All windows are optimally insulated thanks to foamed cavity insulation zones between the interior and exterior profiles. A baffle pane runs in front of the actual window pane, so that the roller blinds between these two are protected from the wind, and can also be used in the sunny and windy weather typical of Berlin.

FACTS AND FIGURES

**BUILDER**
Humboldt-Universität zu Berlin, represented by its Technical Department

**CONSTRUCTION DEPARTMENT**
Senatsverwaltung für Stadtentwicklung Division V – Construction

**ARCHITECT**
Max Dudler (Berlin, Zürich, Frankfurt)

**USERS**
University Library and the Computer and Media Service

**COSTS**
€ 75,500,000

**OPENING**
12/10/2009

**MAIN AREA**
20,296 m²

**ENCLOSED SPACE**
144,000 m³

**WORK SPACES**
Public work spaces: 1,000
including computer work stations: 450
including pc-pool: 180
Multimedia Workstations: 44
Courses in computer training rooms: 35
Group study rooms (6-10 persons): 8
Individual work spaces: 71

**BUILT-UP MATERIALS**
- Concrete: 23,350 m³
- Natural stone cladding: 6,800 m²
- Exterior glass surface: 5,400 m²
- The inside glass surface: 7,000 m²
- Glass skylights (2.40x2.40m): 92
- Total cable length: 210 Km

**TECHNICAL EQUIPMENT**
- Gas extinguishing systems for book magazines and IT
- CHP (combined heat and power)
- Ventilation systems total power 180,000 m³/h
- Concrete core activation through air ducts in the basement ceiling
- Electrical power 2200 kVA
- 1150 kVA emergency diesel
- 2 high-performance, highly redundant routers in the core area with 10 Gigabit links
- Modular Switch to the building supply with 10 Gigabit links
- 2 storage system with 170 TB storage system
- 2 conveyors with automatic book return

**PROJECT MANAGEMENT**
ProCon Ingenieurgesellschaft mbH

**TECHNICAL BUILDING EQUIPMENT**
Zbell, Willner + Partner mbH

**STRUCTURAL DESIGN**
Leonard, Andrå + Partner VBI, GmbH

**CONSTRUCTION MANAGEMENT**
Döpping-Widell Dipl.-Ing. Architekten

**FIRE PROTECTION DESIGN**
Müller BBM Brandschutz GmbH

Updated: October 2017

https://bauten.hu-berlin.de/de/grimmt
**INTERNAL STRUCTURE**

From the outside, its reduced palette of materials and colours, together with a precise, geometrical use of shapes, stand out on their own and give the building a sculptural look and feel. On the inside, the clarity and serenity of the design are propagated through a strictly symmetrical construction, the use of near-natural materials like stone, wood and linoleum, and the colours black and white. Red elements are only employed in areas designed for communication, such as the cafeteria and lounges. American black cherry wood veneer was used for the wall panelling and desktop furnishings, and walnut for the parquet flooring in the reading rooms.

Spread across two floors, the generous foyer area is structured by two cubes, the upper levels of which are an inviting place to take a few minutes’ break. The three entrances and large glass frontage form a conscious connection with the urban environment, while the spacious forecourt plays an intermediary role between interior and exterior.

The artwork “Bullet Holes” by German-American artist Arun Kuplas is situated in the entrance hall. This piece references the immediate urban environment around the Grimm-Zentrum, as well as the history of Berlin and that of the University Library. It depicts details of the columns on Museum Island that have been scarred by the destruction of war, as well as sections of the facade at Dorotheenstraße 1, where the University Library administration used to be housed until its relocation to the Grimm-Zentrum.

**EXTERNAL STRUCTURE**

The building is made up of two sections of differing heights: with a height of 22 m, the lower part of the building integrates seamlessly into Berlin’s architectural landscape. The southern wing stands opposite at a height of 38 m, marking out the Grimm-Zentrum as an imposing public structure. At the same time, this latter section shades the lower part, and with it the glass roof over the reading terraces. This means that awnings...