Natural air conditioning of stacks in Koblenz

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Main Principles of the Koblenz Building

- Separation of three different areas
- Natural air conditioning of the stacks - Kölner Modell
- Possibilities for further stacks
View of the front
The situation at move-in

- Problems with humidity after moving in.
- Use of dehumidifier in the stacks
Advancement of the situation

- Bringing in of fresh air at specified outer climatic conditions (humidity and temperature)

- Moving the air inside the stacks with ventilators - to prevent mildew
Underground stacks
Climatic condition

- The condition in the stacks are stable as shown in the following charts
Normal condition

Figure 3. Data sheet showing outdoor and indoor temperature and relative humidity at the Bundesarchiv, Koblenz, 12 August 1998.
Problems

The human factor

- Workers in the stacks tend to leave doors open

- Solution:
  - organisational arrangements and
  - constructional devices such as air locks
Advantages

- Low energy costs

- Independence from electricity - the conditions in the stacks remain stable even if the Bundesarchiv is cut off from electricity
Perspectives

- New Building at the site in Berlin-Lichterfelde
- Stacks for 110 km of files
- Natural air conditioning fitting for the climatic conditions of Berlin
- New reading rooms and administrative area in old buildings (dating from 1878)