B 4 Nr. 2399

Solar protection of buildings without air-conditioning

In the past decades, German regulations on solar protection of buildings without air-conditioning only made recommendations, which did not have the force of binding requirements. This gave rise to frequent disputes as to whether the lack of solar protection was a defect of the building or not, especially when the tenants of apartment blocks or the buyers of 'turnkey' houses with a large proportion of unprotected window areas, found that indoor temperatures were rising considerably during the summer.

The report describes the factors which lead to an increased temperature in occupied rooms and explains the methods of calculation as well as the rules for dimensioning sun protection.

The consequences of insufficient solar protection are exemplified by model simulations for several buildings.

The current practice of determining and dimensioning solar protection for new houses is documented by a survey made among engineers and facade consultants.

The findings show that the recommendations for sun protection specified in the regulations are mostly carried out on office and administration buildings, so that in these cases, protective devices form part of the contract, even if they were not expressly agreed on.

By contrast, residential buildings are *not,* as a rule, provided with solar protection. In order to avoid later disputes, the type and extent of protective measures should be clearly specified in the contract.