is a gray, massive, pure calcite, lithographic limestone. In some blocks it is essentially isotropic in mechanical behavior and in others it exhibits a low degree of strength anisotropy and preferred crystallographic orientation of constituent grains (Siemes, 1966). The Yule marble is a pure calcite marble with a median grain size between 0.5 and 1.0 mm. It is remarkably homogeneous in the nature and degree of its anisotropy, and is characterized by a marked strength anisotropy which, as mentioned earlier, is related to a strong preferred orientation of the constituent crystals. Further to the similarities between these rocks (other than for grain size), Siemes has shown that changes in crystallographic orientation of the constituent grains in Solenhofen specimens brought about by experimental deformation are essentially identical to those produced in experimentally deformed Yule marble. Some representative strength data for Solenhofen limestone and Yule marble under given sets of experimental conditions obtained from Griggs et al. (1953), Turner et al. (1956), Heard (1960), and Handin (1966) are listed in Table 3. Only data from the strongest orientation for the Yule marble are listed. It is clear

Table 3

SOME REPRESENTATIVE STRESS-STRAIN DATA
FOR SOLENHOFEN LIMESTONE AND YULE MARBLE

Experimental Conditions	Solenhofen Limestone	Yule Marble
All deformed dry, at strain rate of 2×10^{-4}/sec, at 5070 bars confining pressure, and at temperatures as follows:	Differential stress at 10 percent strain (bars)	Differential stress at 10 percent strain (bars)
24°C	7180	4280 (Av. of 4 tests)
150°C	6320	3730
300°C	5150	2500 (Av. of 5 tests)
400-500°C	4300 (400°C)	1980 (Av. of 4, 500°C)