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Sommario/riassunto	<p>This is a study of the changes which occur in the microstructure of sintered bronze under various conditions with respect to selected sintering variables. The study is based on color photomicrographs of the structures developed. Visual and quantitative evaluations of the pictures are presented. The report is part of a broad study of the properties of sintered bronze which is being conducted by members of ASTM Committee B-9 on Metal Powders and Metal Powder Products. Other reports are expected to be prepared when sufficient data have been developed. Sintered bronze has been a major production item of the powder metallurgy industry for more than 35 years. During this period, various studies have been made of the changes that take place during the sintering of briquets made from a mixture of copper and tin powder. Colored photomicrographs taken by Hall show phase changes occurring during the sintering of a bronze containing 9 per cent tin and 6 per cent graphite at 1490 F. Studies of the formation of copper-tin alloys were made by Duwez on the basis of X-ray diffraction patterns and thermal expansion measurements. The process of homogenization of bronze during sintering has been studied by Rhines and his co-workers. A comprehensive review of the subject was made by Lenel in 1948. Since that time, considerable progress has been made toward standardization for metal powder products. This activity has led to the present study to obtain a better fundamental understanding of the microstructural changes which occur in a standard bronze material</p>

sintered according to conditions approximating commercial practices.

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