

Petitioner's 1958 annual report had been even more specific about the special quality of sintered metal

'Traditional friction materials cannot stand up under the heat and pressure generated in the brakes of jet aircraft, or in the transmission of heavy-duty earthmoving equipment. Technological know-how enables Brake Shoe to create parts like these clutch discs out of powdered metals, which are shaped under pressure and then sintered until they fuse.'

Petitioner's 1961 annual report provides this comparison between the functions of organic and sintered metal friction materials

'Through its American Brakeblok Division, the company is a major producer of both organic and metallic friction materials. Our principal *931 products are brake lining for cars, trucks and buses. These are made of asbestos and other materials bonded under heat and pressure with an organic resin.

'A fully-loaded jet airliner such as the Boeing 707 weighs about 250,000 pounds and lands at speeds as high as 138 miles per hour. Ordinary materials would melt under the terrific heat generated by its brakes, so American Brakeblok makes jet plane braking materials out of sintered metals. This type of material is first formed out of powdered metals into near-finished shape, and is then fused solid under heat and pressure.

'Sintered materials also have the heat and wear resistance needed to stand up under grueling use in crawler tractors and heavy earthmoving equipment. American Brakeblok provides clutch and brake parts of sintered metals for construction equipment and other types of industrial machinery.'

The record also contains detailed expert testimony concerning the functional and economic differences between sintered metal friction materials and organic friction materials, as well as similarly detailed testimony concerning the differences in methodology and plant equipment required to

produce them.

Seven indicia of a valid submarket are set forth in *Brown Shoe Co. v. United States*, 370 U.S. 294, 82 S.Ct. 1502, 8 L.Ed.2d 510 (1962).

The outer boundaries of a product market are determined by the reasonable interchangeability of use or the cross-elasticity of demand between the product itself and substitutes for it.⁴²

FN42. The cross-elasticity of production facilities may also be an important factor in defining a product market within which a vertical merger is to be viewed. Cf. *United States v. Columbia Steel Co.*, 334 U.S. 495, 510-511, 68 S.Ct. 1107, 92 L.Ed. 1533, *United States v. Bethlehem Steel Corp.*, 168 F.Supp. 576, 592 (D.C.S.D.N.Y.). However, the District Court made but limited findings concerning the feasibility of interchanging equipment in the manufacture of non-rubber footwear. At the same time, the record supports the court's conclusion that individual plants generally produced shoes in only one of the product lines the court found relevant.

However, within this broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes. *United States v. E. I. du Pont de Nemours & Co.*, 353 U.S. 586, 593-595, 77 S.Ct. 872, 1 L.Ed.2d 1057. The boundaries of such a submarket may be determined by examining such practical indicia as industry or public recognition of the submarket as a separate economic entity, the product's peculiar characteristics and uses, unique production facilities, distinct customers, distinct prices, sensitivity to price changes, and specialized vendors.⁴³ Because § 7 of the Clayton Act prohibits any merger which may substantially lessen competition 'in any line of commerce', it is necessary to examine the effects of a merger in each such economically significant submarket to determine if there is a reasonable probability that the merger will substantially lessen competition. If such a probability is found to exist, the merger is