

Fig. 1.24. Effect of compacting pressure on the density of the powder compact

*Compactabilidade do pó é pior de pós finos e pior*

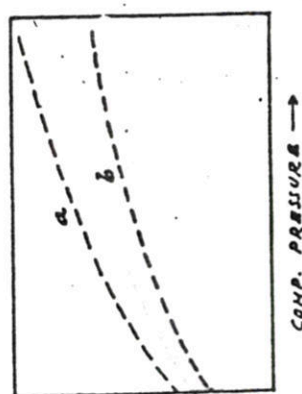


Fig. 1.25. Effect of powder particle size on the density of the pressed compact (pressure constant)

*Densidade do verde cresce com tamanho de partícula*

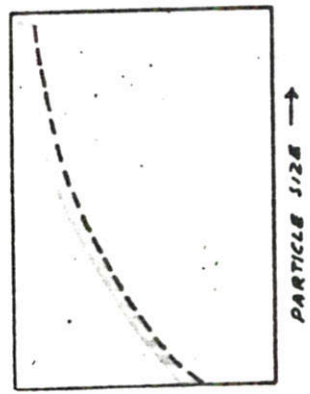


Fig. 1.26. Density of pressed powder compacts as affected by the ratio die wall area/pressing area

a) with lubricant  
b) without lubricant

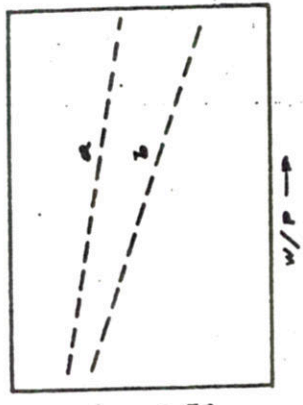


Fig. 1.27. Density of pressed powder compacts as affected by the ratio die wall area/pressing area

Compacting pressure  
 $P_1 > P_2 > P_3$

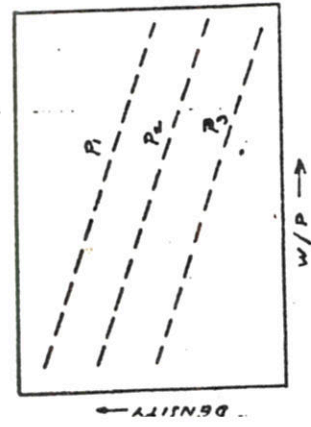


Fig. 1.28. Density of pressed powder compacts as affected by the ratio die wall area/pressing area

a) double action pressing  
b) single action pressing

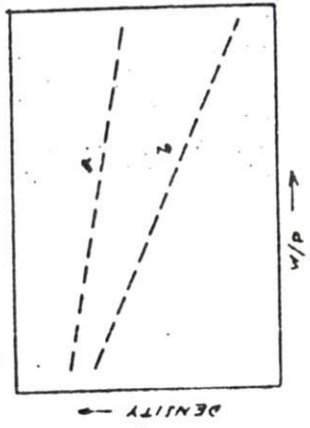


Fig. 1.29. Method of compacting and its effect on the density of the pressed powder compact

a) isostatic pressing  
b) unidirectional pressing

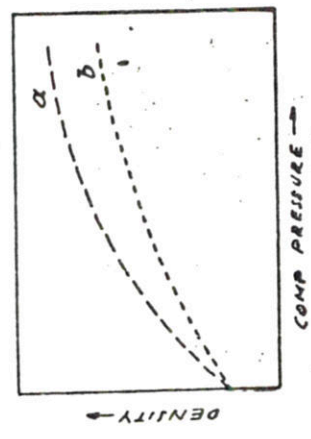


Fig. 1.30. Effect of particle size on the strength of the pressed powder compact (pressure constant)

*Resistência a rasgo diminui quando cresce*

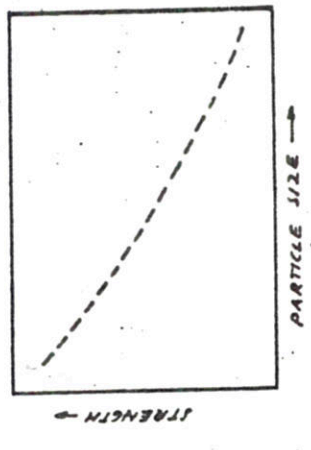
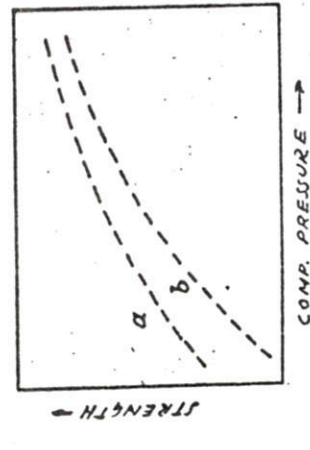


Fig. 1.31. Effect of compacting pressure on the strength of the powder compact (identical densities)

a) fine powders  
b) coarse powders

*res*



Wder Particle Size

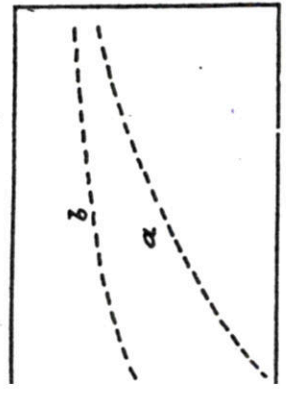


Fig. 1.1. Effect of powder particle size on the density of the loose powder  
 a) apparent density  
 b) tap density

*denso para o aparente  
 cresce com tamanho  
 de partícula*

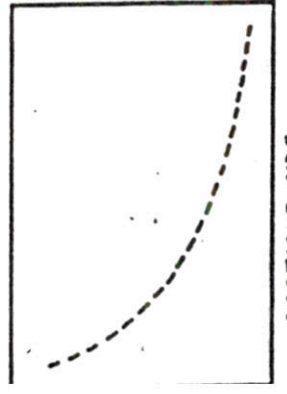


Fig. 1.2. Specific surface of the powder mass as a function of particle size

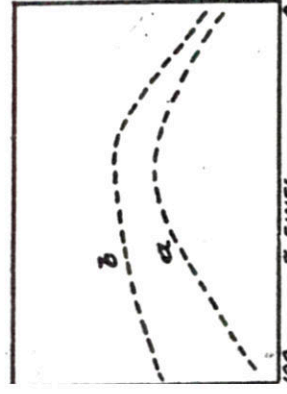


Fig. 1.3. Effect of mixing of coarse and fine powders on the density of a loose powder mass  
 a) apparent density  
 b) tap density

*otimizar a composição granulométrica para melhorar o desempenho aparente*

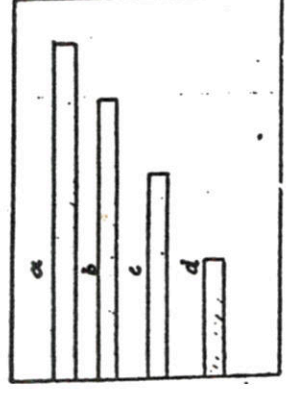


Fig. 1.4. Apparent density of a powder as affected by particle shape  
 a) spherical  
 b) round  
 c) irregular  
 d) dentritic

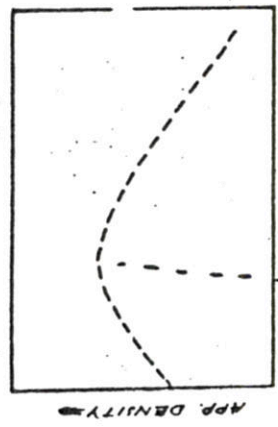


Fig. 1.5. Effect of the amount of lubricant added on the apparent density of a powder

*Existe teor ótimo*

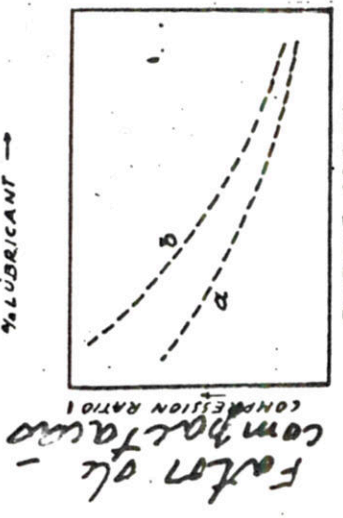


Fig. 1.6. Effect of powder particle size and oxidation on the compression ratio:  
 a) metallic particle surface  
 b) oxidized particle surface

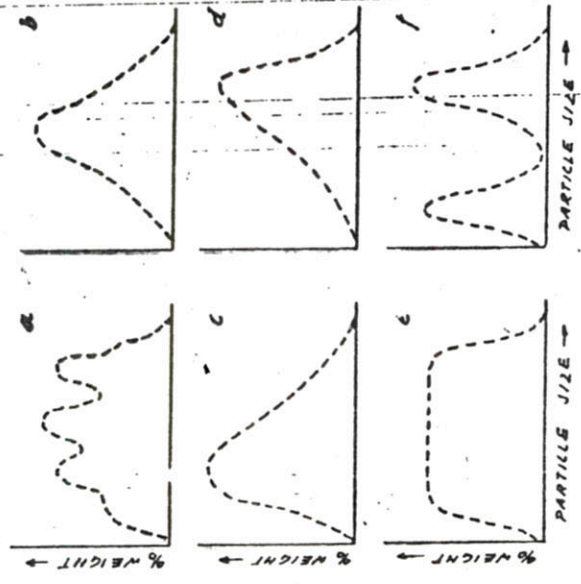


Fig. 1.7. Various types of powder particle size distribution

*Após a produção!*