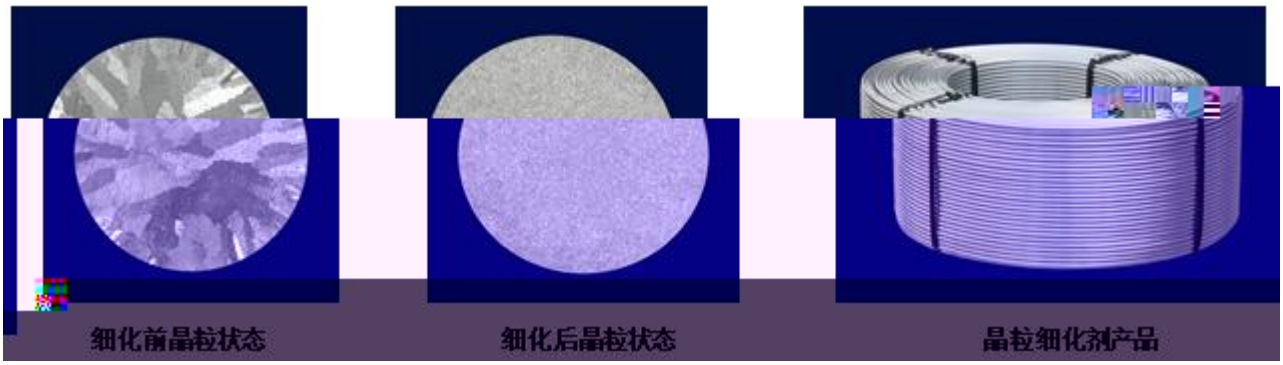
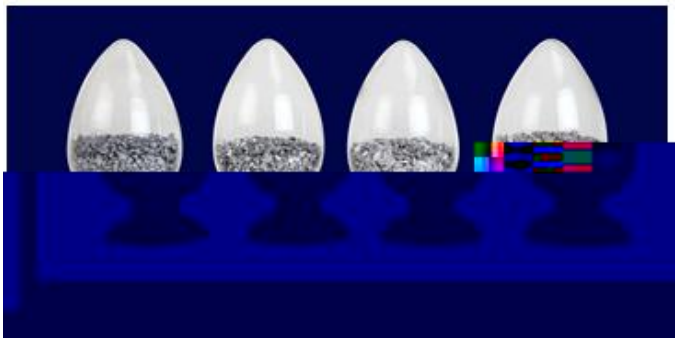
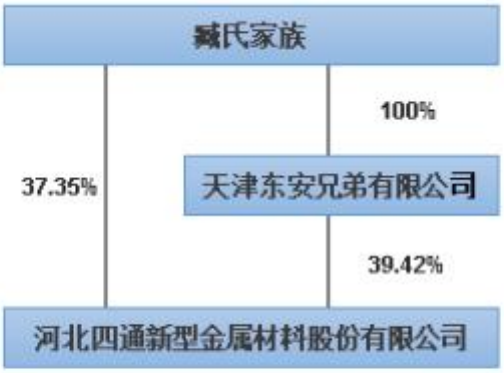

细化前晶粒状态
细化后晶粒状态
晶粒细化剂产品



低压铸造

铸造旋压

液态（固态）模锻



截止 2019 年 12 月 31 日的产权及控制关系方框图