ABSTRACT

METHOD AND APPARATUS FOR PRODUCING AMMONIA VIA A SUPERSONIC QUENCHING PROCESS

The present invention relates to a method and apparatus for producing ammonia. The method includes carbothermic reduction of a composite material comprising metal oxide and a carbonaceous reducing agent in a nitrogen atmosphere to form a gaseous functional material. The gaseous functional material is subject to a supersonic quenching process where the gaseous functional material is supersonically cooled to form a solid functional material. An apparatus for carrying out this process is also disclosed.

[**FIG.2**]