

## HP-Dry CCS, High Pressure Dry Continuous Coal Supply

The HP-Dry CCS presents a continuous process for dry conveying of powdered coal or a blend of bulk solid dry carbonaceous material subject to partial oxidization whereby the conveying feed will be conveyed via a suitable conveyer from a atmospheric silo to a or a number of extruder's funnel(s) and fed in continuo to a or a number of extruder(s), in which the powdered feed material will be densified along the compression zone of the extruder up to high pressure and shall be discharged into a downstream said First Pressurized Vessel, wherefrom the feeding material has to be transported via a pressurized tubular drag conveyer to the said Second Pressurized Vessel, which is equipped with one or more Reactor-Feeding Unit(s) each one consisting of a Discharge Star Valve, Reactor-Feed-Line and an Injection-Line individually, whereby the feed carbonaceous powder will be injected with an injection gaseous media (saturated steam, superheated steam, inert gases, natural gas or a blend of those gaseous media in any composition) by the way of pneumatic bulk conveying into a downstream pressurized gasification reactor and chemically converted under high temperature and elevated pressure by partial oxidization to syngas gas, slag and ash.

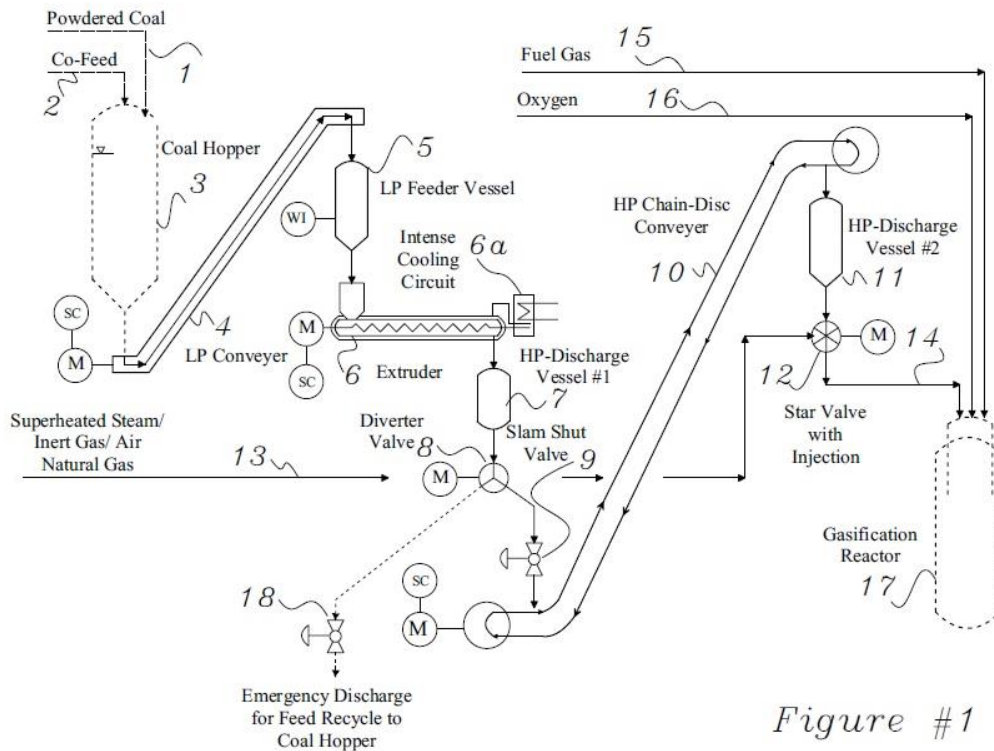


Figure #1

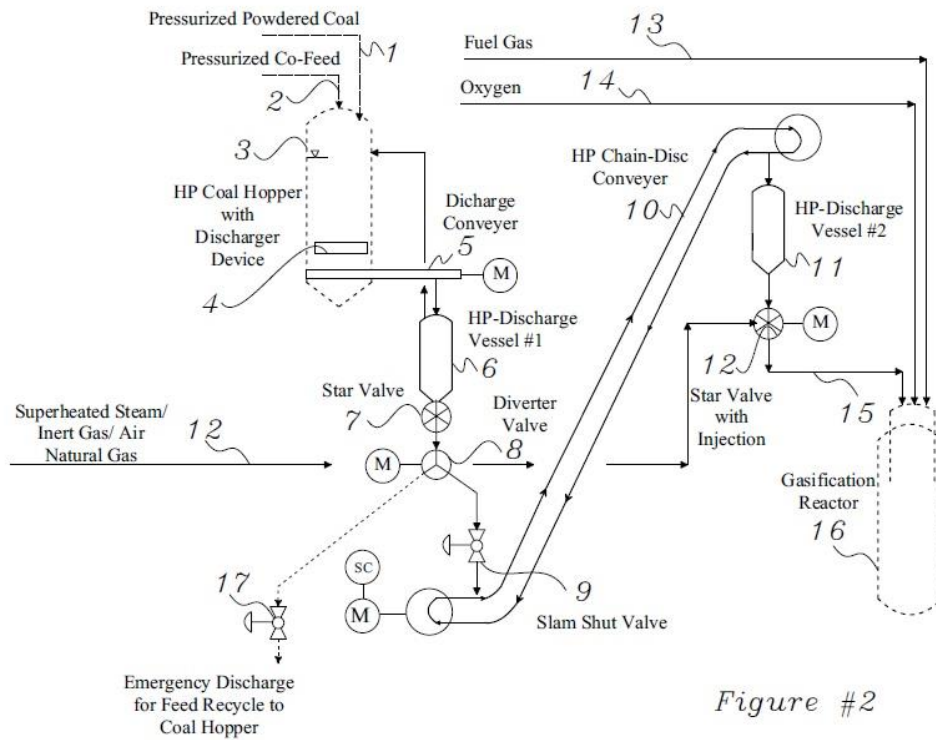
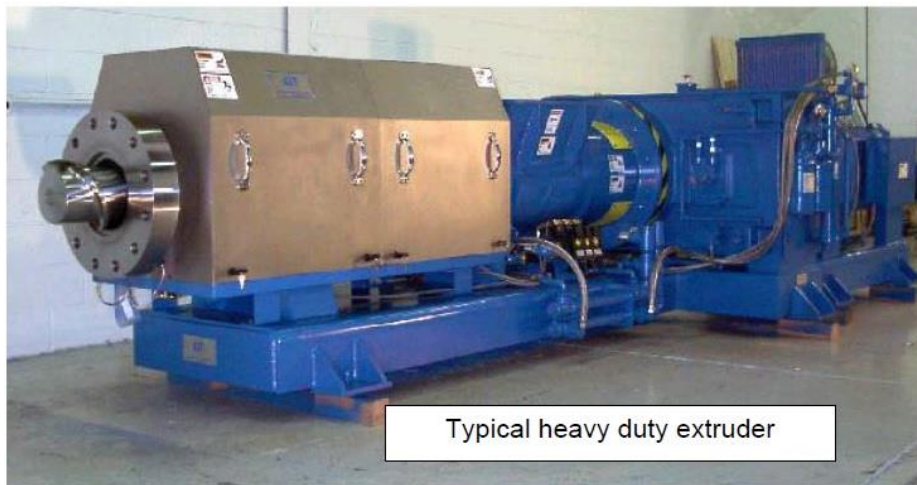
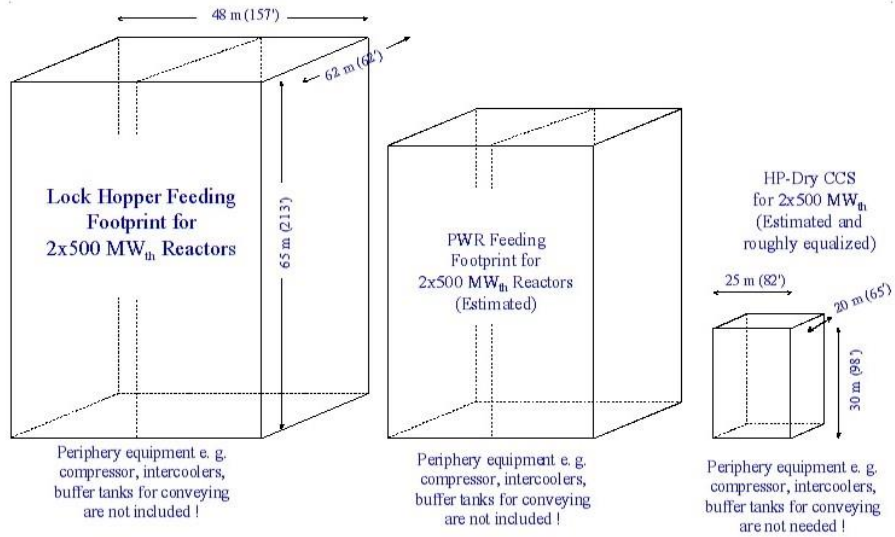


Figure #2





**Comparison of footprint of different coal feeding systems.**

Remark: Footprint's HP-Dry CCS has been equalized at ease of comparison because the system equipment are essentially different.