

Title (en)  
LOW NOX COGENERATION PROCESS

Publication  
**EP 0317110 B1 19920304 (EN)**

Application  
**EP 88310217 A 19881031**

Priority  
• US 12206787 A 19871118  
• US 25269088 A 19881003  
• US 25277888 A 19881003

Abstract (en)  
[origin: EP0317110A2] A process to produce electricity and heat which involves combusting (10) fuel to produce a gaseous stream of combustion products, passing the gaseous stream through a turbine (14) to generate electricity, and to produce a gaseous exhaust stream, adding additional fuel to the exhaust stream, to provide a fuel-rich combustible gas stream having fuel in excess of the oxygen in the combustible gas stream, catalytically treating (18) over a reducing catalyst of combusting the fuel-rich combustible gas stream in a reducing atmosphere to produce a heated oxygen-depleted gaseous stream, converting (22) at least a portion of the heat in the oxygen depleted stream into a steam, adding air (24) to the oxygen-depleted stream to produce a stoichiometric excess of oxygen in the resultant stream relative to fuel present in the resultant stream, passing the resultant stream over an oxidizing catalyst (26) to produce an oxidized gaseous stream, removing heat (28) from the oxidized stream, and venting (32) the resultant cooled stream. Preferably, at least some of the oxidized stream (36) is cycled to the step of combusting fuel. An apparatus system for carrying out this process is also provided.

IPC 1-7  
**F01K 23/10; F22B 1/18; F23C 6/04; F23C 9/00; F23J 15/00**

IPC 8 full level  
**B01D 53/94** (2006.01); **F01K 23/10** (2006.01); **F22B 1/18** (2006.01); **F23C 6/04** (2006.01); **F23C 9/00** (2006.01); **F23J 15/00** (2006.01)

CPC (source: EP)  
**F01K 23/103** (2013.01); **F22B 1/1861** (2013.01); **F23C 6/042** (2013.01); **F23C 9/00** (2013.01); **F23J 15/006** (2013.01); **F23J 2215/20** (2013.01); **F23J 2219/10** (2013.01)

Cited by  
CN108350806A; EP0385690A3; EP0899505A3; EP0384295A3; DE3905775A1; US5820651A; US5833730A; US5851256A; US5810901A; US5837028A; US5849059A; WO2023004073A1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
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