README

October 2, 2019

1 CGC Total Power Prediction

1.1 Data Information

1.1.1 Description

The cracked gas compressor (CGC) is the most critical unit in the entire ethylene production facility, It Consisting 5 stages.

1.2 Attribute information

The dataset is time series (10/Jun/2014 - 31/Dec/2017) data of various online sensors and other measured attributes for a CGC unit.

The dataset attributes properties are as follows:

Numer - Name - Data Type - Measurement - Description

1 1st Stage Suction Pressure quantitati kg/cm2g input variable quantitative °C input variable quantitative %C input variable %C input vari	0	1st Stage Suction Temperature	quantitative	°C	input variable
1st Stage Discharge Pressure quantitative kg/cm2g input variable quantitative classification quantitative quantitative classification quantita	1	1st Stage Suction Pressure	quantitati	kg/cm2g	input variable
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5th Stage Discharge Pressure quantitative kg/cm2g input variable quantitative knm3/hr input variable 3rd Stage Discharge Flow quantitative knm3/hr input variable	17	5th Stage Suction Pressure	quantitative	kNm3/hr	input variable
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	20	1st Stage Discharge Flow	quantitative	kNm3/hr	input variable
5th Stage Discharge Flow quantitative kNm3/hr input variable	21	3rd Stage Discharge Flow	quantitative	kNm3/hr	input variable
	22	5th Stage Discharge Flow	quantitative	kNm3/hr	input variable

23	C3 Splitter Purge to 4th Stage Suction	${\tt quantitative}$	Nm3/hr	input variable
24	C2 Splitter Purge to 5th Stage Suction	quantitative	Nm3/hr	input variable
25	CW Supply Temperature	quantitative	°C	input variable
26	CW Flow to Olefins	quantitative	tons/hr	input variable
27	CW Pressure	quantitative	kg/cm2g	input variable
28	Compressor Speed	quantitative	rpm	input variable
29	UHP Steam Flow to KT-1	quantitative	tons/hr	input variable
30	UHP Steam Pressure	quantitative	kg/cm2g	input variable
31	UHP Steam Temperature	quantitative	°C	input variable
32	HP Steam Extraction Flow from KT-1	quantitative	tons/hr	input variable
33	HP Steam Extraction Pressure	quantitative	kg/cm2g	input variable
34	HP Steam Extraction Temperature	quantitative	°C	input variable
35	E-24 PG Inlet Temperature	quantitative	°C	input variable
36	Total Power	quantitative	MW	output variable
37	DateTime	DateTime	Date & H:M:s	input variable