



Dev Energy

Innovative Solutions for

COAL GASIFICATION



www.devenery.co.in

2014

India's 1st Dog House type
Flue Extraction system
for Induction Furnace

2000

Inception of DEV ENERGY

2013

100th Project

2004

India's 1st Double
Stage Clean Gas System
for Tiles Plant

2012

India's 1st Double
Stage Clean Gas System
for Refractory Tunnel Kiln

2006

India's 1st Double Stage
Hot Gas System for
Steel Reheating Furnace



2011

India's 1st Double
Stage Clean Gas
System for Grate Kiln
Pellet Plant



WHY CHOOSE US

200+

Successful
Projects

30+

Core Technical
Team

100+

Technical
Offerings

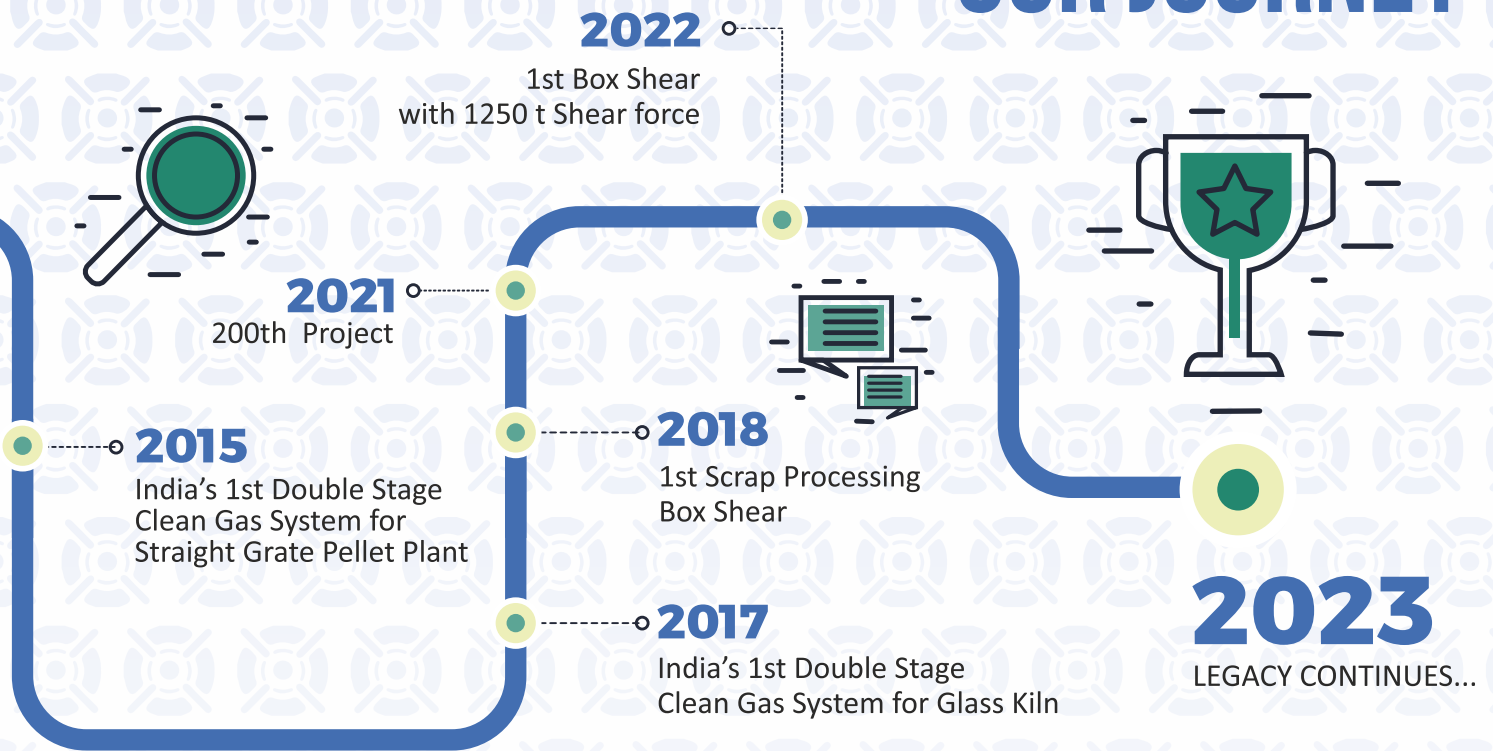
1000000+ Sq. ft

Industrial Facility



Sh. Devender Kumar our CMD is a dynamic and experienced business professional, with experience of over 40 years in various industries. His vision of providing reliable and efficient solution to the industry, drives us to continuously innovate and excel.

OUR JOURNEY



OUR PARTNER IN SUCCESS



Hubei Environmental Protection



PILLARS OF OUR SUCCESS





DOUBLE STAGE GASIFICATION TECHNOLOGY

Upstage Gas

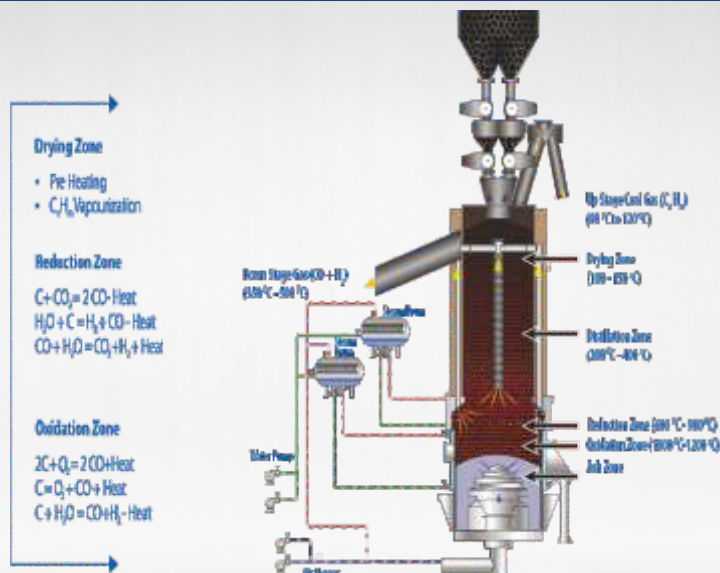
- ➔ Volatile Matter of Coal is extracted in un-cracked form (CnHm)
- ➔ Calorific Value ~1750 Kcal/Nm³.
- ➔ Low Outlet Gas Temperature ~ 100°C

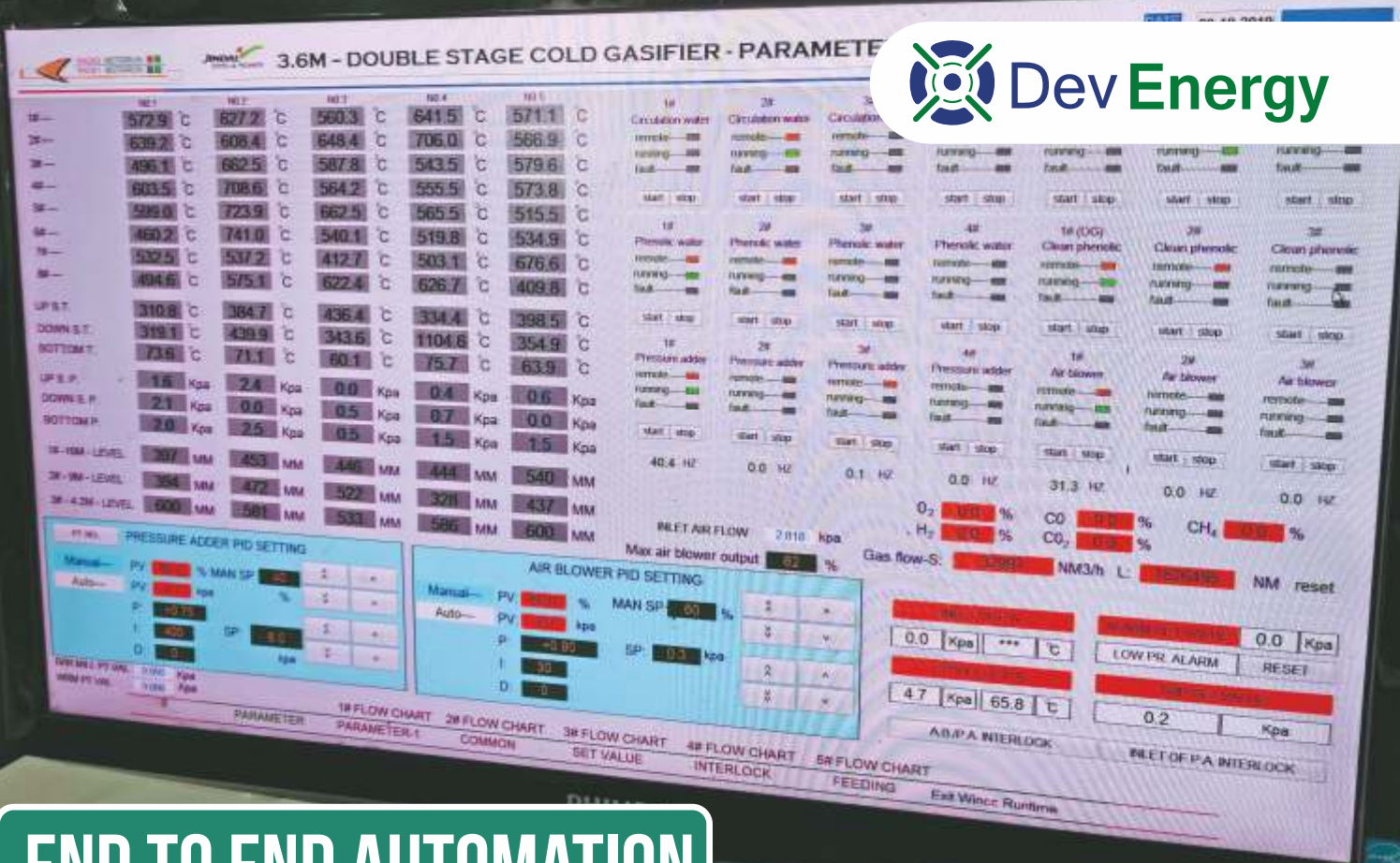
Downstage Gas

- ➔ Carbonized Gas is extracted as result of Gasification Reaction
- ➔ Calorific value ~1200 Kcal/Nm³.
- ➔ High Outlet Gas Temperature ~450°C

Coal Gas Quality

- ➔ Tar Content <10 mg/Nm³
- ➔ Dust Content <10 mg/Nm³
- ➔ Sulphur Content <10 mg/Nm³
- ➔ Moisture Content <30mg/Nm³
- ➔ Cold Gas Temperature ~40°C
- ➔ Coal Gas Pressure 8 – 150 Kpa
- ➔ Phenolic Water Discharge Nil

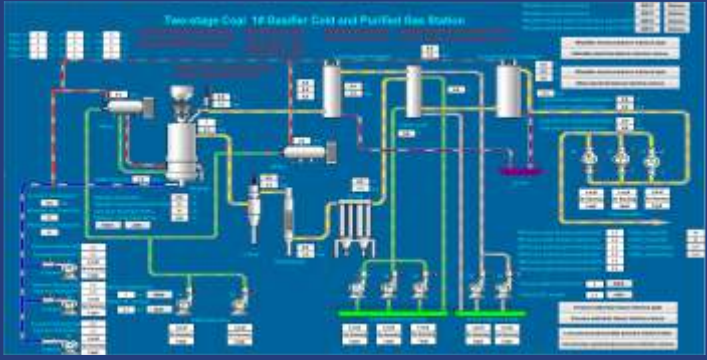




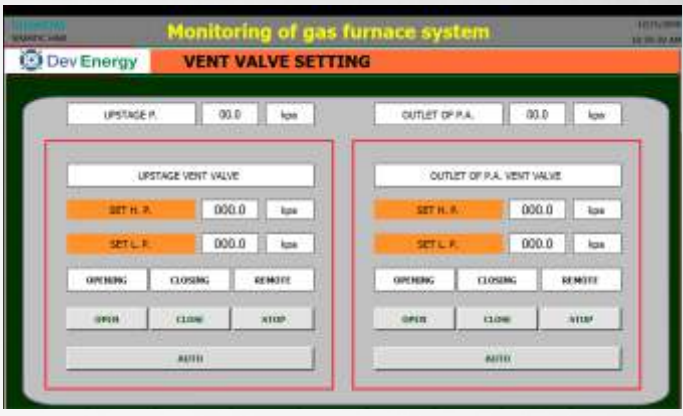
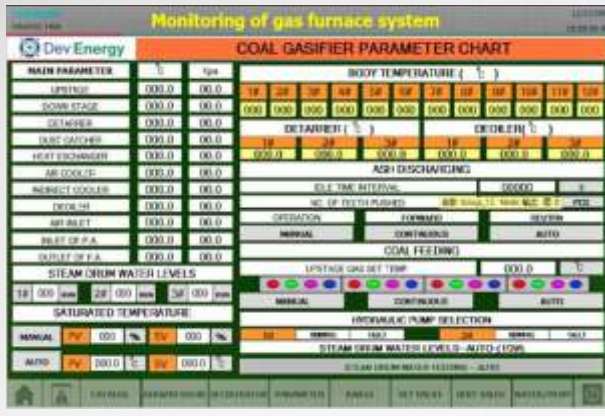
END TO END AUTOMATION

FEATURES :

- ➔ Hot Redundant DSC control system.
- ➔ Monitoring & Control through Scada
- ➔ Automatic In Coal Feeding & Ash Removal
- ➔ Hot Redundant DCS Control System
- ➔ Process Instruments & safety valves
- ➔ Scalable Process Visualization System
- ➔ VVFD Control For ID & FD Motors
- ➔ Process Data Logging & Alarms Historical Trends



Process screen





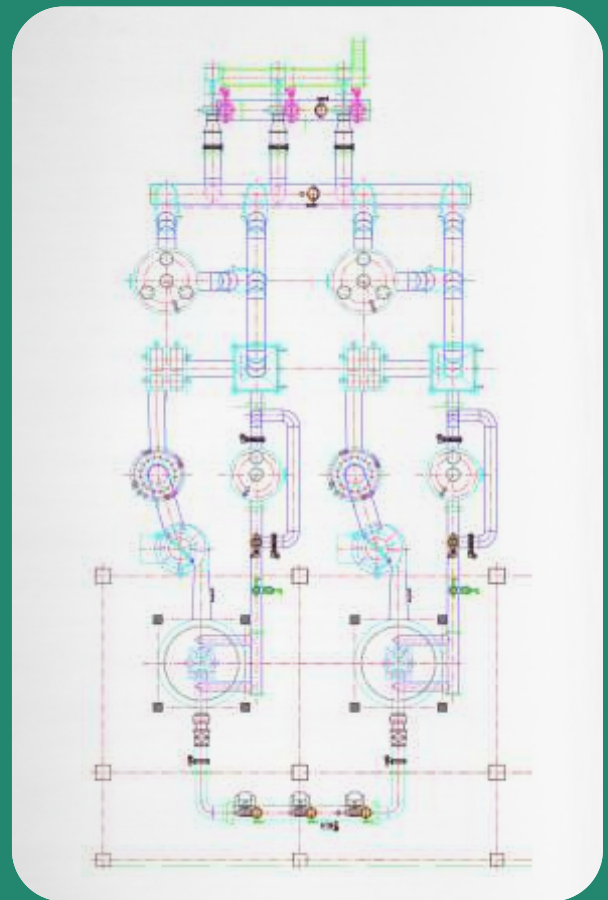
FOR LOW ASH COAL

6 Stage Gas Purification & Cooling System

- Cyclone
- Detarrer
- Heat exchanger
- Air cooler
- Deoiler
- Indirect cooler

Features :

- Calorific value of gas >1450 Kcal/Nm³.
- Efficiency ~87%
- Tar recovered ~4.5 % of coal weight



Model	2.6	3.4	3.6	4.0	4.2	4.6
Coal Consumption (Kg/h)	~ 1300	~ 2250	~ 2500	~ 3100	~3450	~4150
Coal Gas Output (Nm ³ /hr)	~ 3400	~ 5850	~ 6500	~ 8100	~8950	~10700

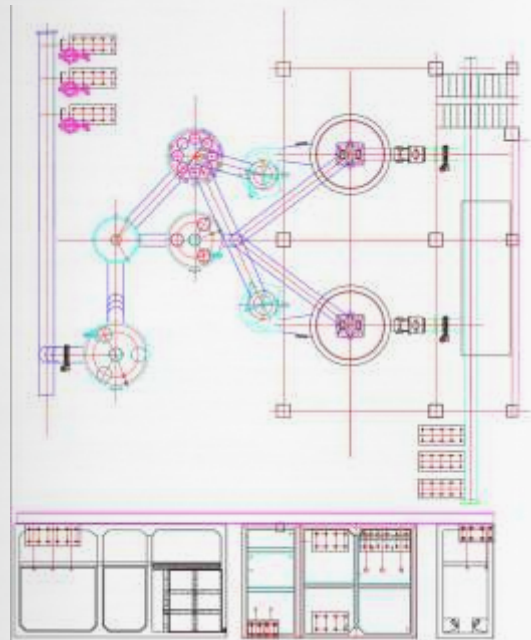
FOR HIGH ASH COAL

5 Stage Gas Purification & Cooling System

- Cyclone
- Detarrer
- Heat exchanger
- Deoiler
- Indirect cooler

Features :

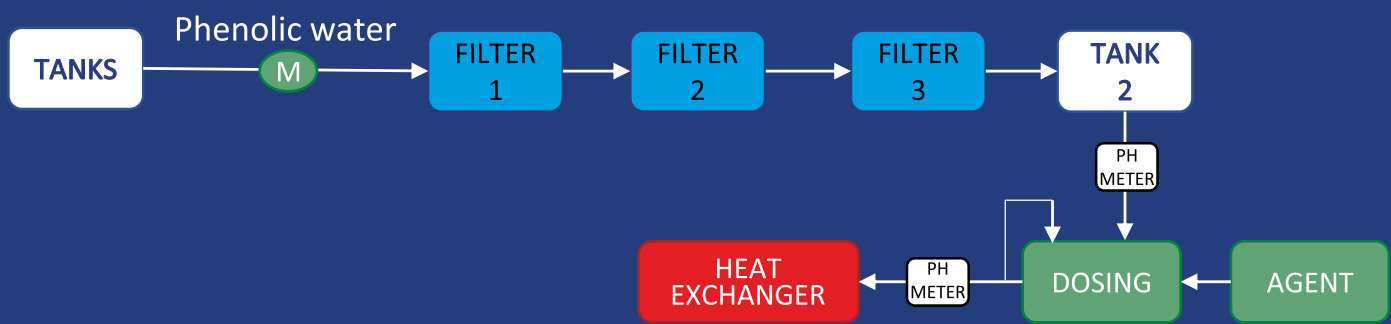
- Calorific value of gas >1300 Kcal/Nm³.
- Efficiency ~78%
- Tar recovered ~3 % of coal weight



Model	2.6	3.4	3.6	4.0	4.2
Coal Consumption (Kg/h)	~ 1500	~ 1800	~ 2100	~ 2400	~2600
Coal Gas Output (Nm ³ /hr)	~ 1800	~ 3200	~3800	~ 4200	~5000



PHENOLIC WATER MANAGEMENT



100% Reuse of Phenolic water



Cooling Tower



Tanks

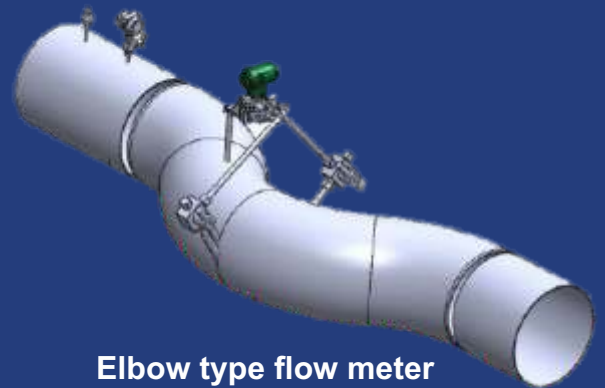


RO System

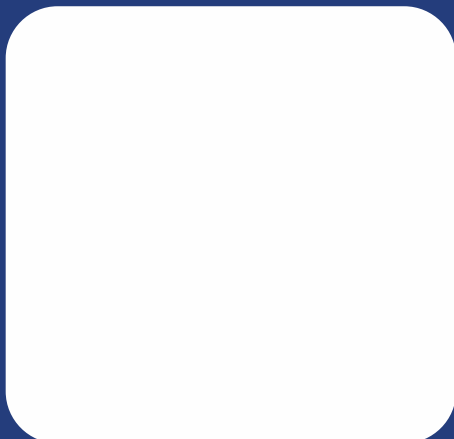
COAL GAS MANAGEMENT

Online Gas Analyzer

- Measure GCV of coal gas.
- NDIR and TCD gas analysis technology
- Measure the concentration of CO, CO₂, H₂, O₂, C_nH_m, C₂H₂, C₂H₄ simultaneously.
- Measure gas quality by calculating gas flow,



Elbow type flow meter



Gas Flow Screen



Gas Analyzer Screen



Gas Analyzer Screen



SAFETY FEATURES

- Emergency independent online UPS.
- CO detectors.
- Emergency lighting
- Fire fighting system
- U- tube water seals
- CCTV & PA system
- N2 purging in gas line
- Safety Venting valves
- Earthing Strip and Lighting Arrestor



Safety Valves



N2 Purging



PA SYSTEM

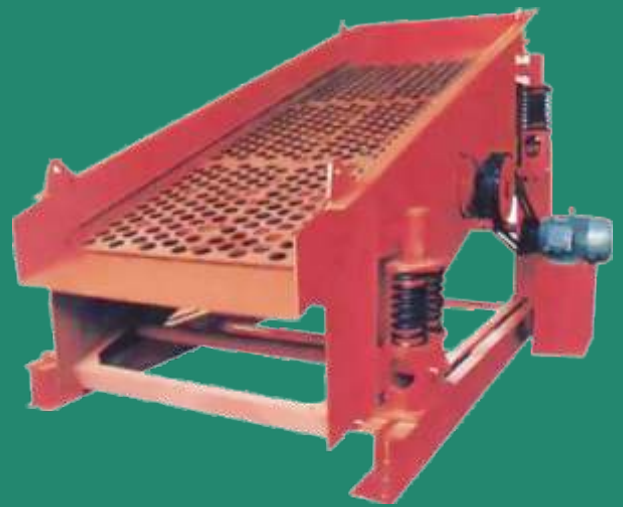


U-Tube Water Seals

COAL & ASH HANDLING

FEATURES :

- Crusher to Size coal 15 – 70mm.
- Integrated from Raw to Sized coal
- Segregation of Fines from coal
- Complete design to take coal upto final coal bin
- Ash collection at fixed area
- Complete automation integrated with DCS



Vibro Screen



Ash Conveyor



High Rise Conveyor



Coal Crusher





10 x 3.6M DSCG





1 x 3.6M DSHG





AGI glaspac


1 x 4.0M DSCG

FOR IOF PELLETIZATION



minera

2 x 4.0M DSCG



Ankit

4 x 3.2M DSCG



**SHRI BAJRANG
POWER AND ISPAT LTD.**
RELIEF STRONGER THAN STEEL.

3 x 3.6M DSCG



2 x 3.4M DSCG



2 x 3.4M DSCG



2 x 3.6M DSCG



1x 3.4M DSCG



1 x 4.0M DSCG

OUR VALUED CUSTOMERS



GASIFICATION

ENGINEERED CARBON



FUMES MANAGEMENT



SCRAP PROCESSING



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