

BOILER REVAMPING & CAPACITY UPGRADATION PROFILE



AVANT-GARDE ENGINEERS AND CONSULTANTS (P) LTD

(AN ISO 9001:2015 AND ISO 17020:2012 ACCREDITED ORGANISATION)



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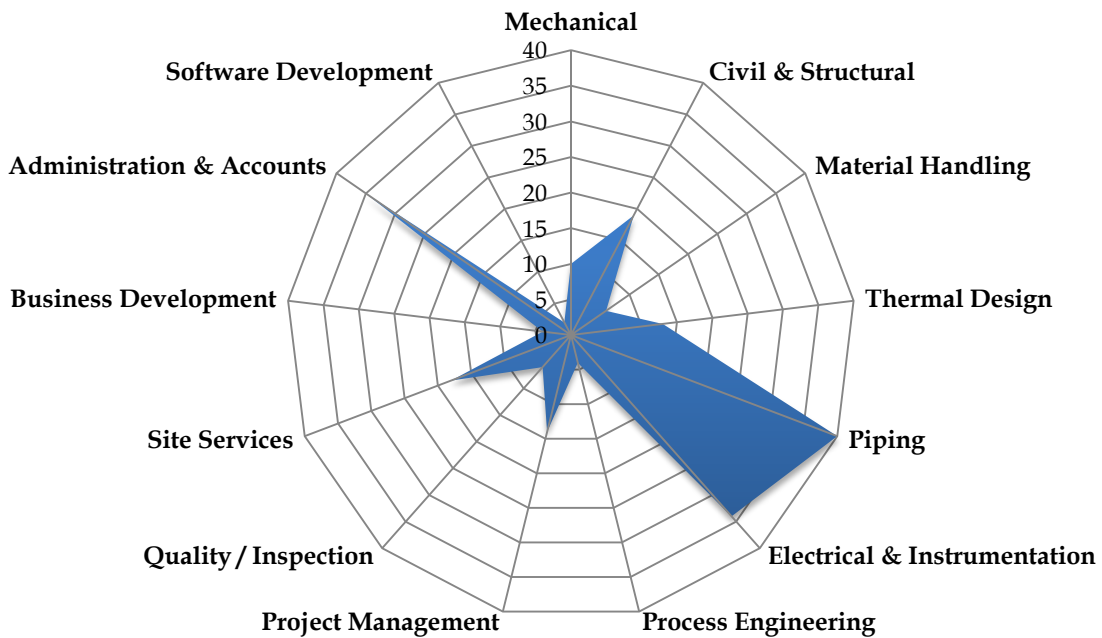
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INCEPTION

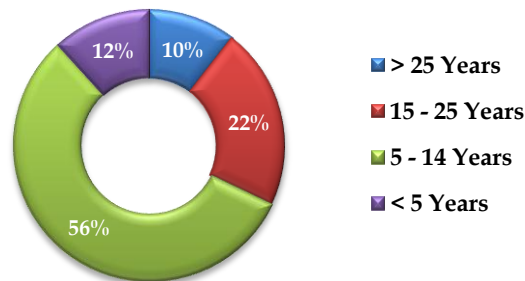
- ❖ YEAR OF ESTABLISHMENT - 1990

STAFFING

- ❖ MULTI DISCIPLINARY TEAM COMPRISE OF MORE THAN 200 WORKFORCE



YEARS OF EXPERIENCE



CONTACT PERSON

- ❖ P.S. SANKARANARAYANAN, DIRECTOR

AREAS OF OPERATION

- Captive power plant
- Cogeneration plant
- Steam generator design and engineering
- Waste heat recovery systems
- Mini Hydro electric power plants
- Combined cycle power plants
- Solar Thermal & Solar PV power plants
- Sugar plant consultancy
- Distillery Plants
- Water and Waste Water treatment plants
- Industrial Effluent Treatment plants
- Process piping
- Equipment design
- Detailed engineering of electrical, mechanical, instrumentation, civil & structures
- Procurement & site supervision
- Third party inspection services
- Residual Life Assessment
- Energy Audit
- Engineering software development

SERVICES OFFERED FOR POWER PLANTS

BASIC ENGINEERING SERVICES

- Preparation of Feasibility Reports
- Preparation of Detailed Project Reports
- Power Purchase Agreement
- Thermal Cycle Optimization
- Plant Engineering

DETAILED ENGINEERING SERVICES

- Plant Layout
- Equipment Layout
- Piping Engineering
- Electrical Engineering
- Switchyard Design
- Instrumentation - DCS, PLC, Micro-processor
- Plant Building Design
- Civil works, civil foundation design for plant, equipment, TG, chimney etc
- Structural design and engineering

PROCUREMENT SERVICES

- Vendor rating
- Preparation of Specification for bought out items
- Evaluation of offers received.

- Preparation of Draft Purchase Order.
- Vendor Drawing Review
- Expediting Services

OTHER SERVICES

- Project Engineering and Co-Ordination services
- Inspection services
- Supervision of Erection and Commissioning
- Performance Testing services

SERVICES OFFERED FOR BOILER CAPACITY UPGRADATION AND COMBUSTION SYSTEM MODIFICATION

- Site visit and study of the boiler during operation.
- Discussion with site engineers regarding boiler performance.
- Preparation of report on modification to be carried out for revamping / capacity up-gradation along with cost estimates.
- Preparation of the boiler performance calculations.
- Preparation of arrangement drawings for modification.
- Preparation of fabrication drawings for Equipment / Piping / Ducting / structures.
- Preparation of engineering specifications for bought out items.
- Supply of materials like Boiler pressure parts, piping, ducting, structures, refractory, insulation, grate, fuel system, instrumentation etc.
- Supply of combustion system modification equipment like Grate, distributors, rotating air dampers, screw feeders, continuous bagasse feeding system etc.
- Pith firing system introduction in boilers.
- Preparation of code calculations and IBR calculations.
- Vendor drawing review.
- Project engineering and coordination services.
- Site supervision and installation services.
- Start-up services and performance testing

AVANT-GARDE EXPERIENCE IN BOILER CAPACITY UPGRADATION

Avant-Garde have provided turnkey services for capacity up-gradation of the Boilers for the following projects.

S. No	Project	Boiler Capacity (TPH)
1	MRK Co-op. Sugar Mills Limited, Tamil Nadu	1 X 64
2	South India Sugars, Tamil Nadu	1 X 45
3	South India Sugars, Tamil Nadu	1 X 16
4	Pondicherry Co-op. Sugars Ltd, Pondicherry	2 X 20
5	Sri Chamundeswari Sugars Ltd, Karnataka	2 X 40

S. No	Project	Boiler Capacity (TPH)
6	Sri Chamundeswari Sugars Ltd, Karnataka	1 X 20
7	India Sugars & Refineries Limited, Karnataka	1 X 30
8	The Nandi Sahakari Sakkare Karkhane Niyamit Limited, Karnataka	2 X 32
9	Jamkhand Sugar Ltd, Karnataka	1 X 90
10	Sadashiva Sugars Limited, Karnataka	1 X 94
11	GMR Technologies & Ind. Ltd, A.P	2 X 35
12	The Jeypore Sugar Company Ltd, A.P	1 X 75
13	Trident Sugars Limited, A.P	1 X 32
14	NCS Sugars Limited, A.P	2 X 32
15	Sudalagunta Sugars Ltd, A.P	1 X 70
16	The Jeypore Sugar Company, A.P	1 X 75
17	Ramgarh Chini Mills Ltd, U.P	2 X 37
18	Balrampur Chini Mills Ltd, U.P	1 X 40
19	Kanoria Sugars and General Mfg Co.Ltd, U.P	1 X 65
20	Rauzagaon Chini Mills, U.P	1 X 60
21	Rauzagaon Chini Mills, U.P	1 X 70
22	Modi Sugar Mills, U.P	1 X 20
23	Lopez Sugar Corporation, Philippines	1 X 90
24	Lopez Sugar Corporation, Philippines	1 X 60
25	Lopez Sugar Corporation, Philippines	1 X 80

AVANT-GARDE EXPERIENCE IN COMBUSTION SYSTEM MODIFICATIONS

Avant-Garde have studied and supplied combustion system equipment for the following plants.

S.No	Project	Location
1	MRK Co-operative Sugar Mills Ltd	Tamil Nadu
2	EID Parry India Limited., Nellikuppam	Tamil Nadu
3	Tripattur Co-operative Sugars Limited	Tamil Nadu
4	NPKRR Co-op. Sugars Limited	Tamil Nadu
5	Madhura sugars Limited	Tamil Nadu
6	Subramaniya Siva Co-op. Sugars Limited	Tamil Nadu
7	Aruna Sugars Limited	Tamil Nadu
8	South India Sugars Ltd	Tamil Nadu
9	Sree Ambika Sugars Ltd	Tamil Nadu
10	EID Parry (I) Ltd., Pettavaithalai	Tamil Nadu

S.No	Project	Location
11	Terra Energy Ltd	Tamil Nadu
12	Mohan Breweries and Distilleries Ltd	Tamil Nadu
13	Rajshree Sugars & Chemicals Ltd	Tamil Nadu
14	Pondicherry Co-op. Sugars Limited	Pondicherry
15	India Sugars and Refineries Limited	Karnataka
16	The Nandi Sahakari Sakkare Karkhane Niyamit Limited	Karnataka
17	Sri Chamundeswari Sugars Limited	Karnataka
18	The Mysore Sugar Company Ltd	Karnataka
19	The Godavari Sugars Mills Ltd	Karnataka
20	Shree Doodhaganga Krishna SSKN	Karnataka
21	Ganpati Sugar Industries Ltd	Karnataka
22	Sudalagunta Sugars Ltd	Andhra Pradesh
23	GMR Technologies and Industries Ltd	Andhra Pradesh
24	NCS Sugars Limited	Andhra Pradesh
25	The Jeypore Sugar Mills Ltd	Andhra Pradesh
26	Trident Sugars Ltd	Andhra Pradesh
27	Agrigold Projects Limited	Andhra Pradesh
28	KCP Sugar and Industries Corp. Ltd	Andhra Pradesh
29	Nava Bharat Ventures Ltd	Andhra Pradesh
30	GSR Sugars Private Ltd	Andhra Pradesh
31	Sree Rayalaseema Alkalies & Allied Chemicals Ltd., (SRAACL)	Andhra Pradesh
32	Indogulf Fertilisers Limited	Uttar Pradesh
33	Triveni Engineering Works Limited	Uttar Pradesh
34	SI-AL SBEC Bio-Energy Ltd	Uttar Pradesh
35	SBEC Sugars Limited	Uttar Pradesh
36	Ramgarh Chini Mills Ltd	Uttar Pradesh
37	Chadha Sugars Private Limited	Uttar Pradesh
38	Rauzagaon Chini Mills	Uttar Pradesh
39	Modi Sugar Mills, Modinagar	Uttar Pradesh
40	Babnan Chini Mills	Uttar Pradesh
41	Gularia Chini Mills Ltd	Uttar Pradesh
42	Kumbhi Chini Mills Ltd	Uttar Pradesh
43	Rai Bahadur Narain Singh Sugar Mills	Jharkhand
44	Lopez Sugar Corporation	Philippines
45	Nzoia Sugar Company Ltd	Kenya
46	Mumias Sugar Company Ltd	Kenya

AVANT-GARDE EXPERIENCE IN BOILER REVAMP / UP-GRADATION STUDY

Avant-Garde have studied the following boilers and prepared detailed reports with cost estimation for revamping / up-gradation.

1. 2 x 16 TPH, 21 kg/cm.sq (g), 310°C boiler for M/s. National Co-op Sugar Mills Ltd., Tamil Nadu
2. 1 x 64 TPH, 42.2 kg/cm.sq (g), 400°C KCP boiler at M/s. MRK Co-op. Sugar Mills Ltd., Tamil Nadu
3. 2 x 32 TPH, 32 kg/cm.sq (g), 380°C WIL boiler capacity up-gradation for M/s. Shakti Sugar Mills Ltd., Sivagangai Unit, Tamil Nadu
4. 1 x 40 TPH, 21 kg/cm.sq (g), 340°C WIL boiler at M/s. Dharmapuri Coop. Sugar Mills Ltd., Tamil Nadu
5. 1 x 64 TPH, 42 kg/cm.sq (g), 400°C IJT boiler at M/s. Cheyyar Coop. Sugar Mills Ltd, Tamil Nadu
6. Proposal for performance improvement of Ennore 3 TPS Unit-3 boiler, Tamil Nadu
7. 1 x 40 TPH, 14 kg/cm.sq (g) 266°C Texmaco Boiler
1 x 35 TPH, 14 Kg/cm. Sq (g) 266°C IJT Boiler
1 x 70 TPH, 32 kg/cm.sq (g) 380°C WIL Boiler at Shree Ambika Sugars Ltd, Tamil Nadu
8. 2 x 16 TPH, 14 kg/cm.sq (g) 266°C IJT Boiler
1 x 16 TPH, 14 kg/cm.sq (g) 266°C Texmaco Boiler
1 x 30 TPH, 14 kg/cm.sq (g) 266°C Texmaco Boiler
1 x 45 TPH, 21 kg/cm.sq (g) 340°C WIL Boiler at Mac Agro Industries Ltd, (Sugar Division) Tamil Nadu
9. 1 x 25 TPH, 32 kg/cm.sq (g) 380°C Ergodyne boiler at M/s. Pettavaithalai Sugars & Chemicals Ltd, Tamil Nadu
10. 1 x 80 TPH, 64 kg/cm.sq (g) 485°C WIL Boiler at M/s. Dharani Sugars Ltd, Tamil Nadu
11. 1 x 70 TPH, 42 kg/sq.cm (g), 410°C KCP Boiler at M/s. Terra Energy Ltd, Tamil Nadu
12. 1 x 45 TPH, 21 kg/cm.sq (g), 340°C WIL boiler at M/s. Sri Chamundeswari Sugars Ltd. Karnataka
13. 1 x 20 TPH, 25 kg/cm.sq (g), 340°C IJT boiler at M/s. Sri Chamundeswari Sugars Ltd. Karnataka
14. 1 x 30 TPH, 20 kg/cm.sq (g), 340°C boiler in M/s. India Sugars and Refineries Ltd, Hospet, Karnataka

15. 1 x 10 TPH, 20 kg/cm.sq (g), 280°C BUKAUWOLF boiler at M/s. India Sugars & Refinery Ltd, Hospet, Karnataka
16. Performance assessment report of old boilers being converted from bagasse firing to coal firing at M/s. Belgundi Cements Pvt Ltd, Karnataka
17. 1 x 18 TPH, 22 kg/cm.sq (g), 340°C IJT boiler at M/s. Godavari Sugar Mills Ltd, Sameerwadi, Karnataka
18. 1 x 20 TPH, 21 kg/cm.sq (g), 305°C WIL boiler at M/s. Godavari Sugar Mills Ltd, Sameerwadi, Karnataka
19. 2 x 20 TPH, 21 kg/cm.sq (g) 340°C KCP boilers at M/s. The Mysore Sugar Company Ltd, Karnataka
20. 2 x 40 TPH, 21 kg/cm.sq (g) 340°C Texmaco Boilers at M/s. The Mysore Sugar Company Ltd, Karnataka
21. 2 x 37.5 TPH, 21 kg/cm. sq (g) 310°C IJT boiler at M/s. Godavari Sugar Mills Ltd, Karnataka
22. 1 x 45 TPH, 21 kg/cm. sq (g) 370°C WIL boiler at M/s. Godavari Sugar Mills Ltd, Karnataka
23. 1 x 10 TPH, 17 kg/cm.sq (g) 300°C Steinmuller Boiler at M/s. Somaiya Organo Chemicals Ltd, Karnataka
24. 1 x 40 TPH WIL, 1 x 30 TPH Texmaco Boilers, 21 kg/cm. sq (g), 340°C at M/s. Shri Malaprabha Sahakari Sakkare Karkhane Niyamit, Karnataka
25. 1 x 70 TPH, 42 kg/cm. sq (g) 430°C CVL Boiler at M/s. Jamkhandi Sugars Ltd, Karnataka
26. 2 x 40 TPH, 45 kg/cm.sq (g) 420°C Thermodyne Boiler at M/s. ICL Sugars Ltd, Karnataka
27. 1 x 130 TPH, 67 kg/sq.cm (g), 485°C Mitsui Babcock Boiler at M/s. The Godavari Sugar Mills Ltd, Karnataka
28. 2 x 20 TPH, 21 kg/cm.sq (g), 340°C boiler at M/s. Kovur Coop. Sugar Mills Ltd, Andhra Pradesh
29. 1 x 40 TPH, 14 kg/cm.sq (g), 270°C TEXMACO boiler and 2 x 25 TPH, 14 kg/cm.sq (g), 270°C WIL boiler at M/s. Andhra Sugars Ltd, Andhra Pradesh
30. 2 x 32 TPH, 32 kg/cm.sq (g) 380°C Ergodyne boiler at M/s. Ganpati Sugar and Industries Ltd, Andhra Pradesh
31. 1 x 70 TPH, 42 kg/cm.sq (g) 420°C FCP-KCP boiler at M/s. Sudalagunta Sugars Limited, Andhra Pradesh

32. 2 x 35 TPH, 45 kg/cm.sq (g) 420°C Lipi boilers at M/s. GMR Technologies and Industries Ltd, Andhra Pradesh
33. 2 x 32 TPH, 32 kg/ sq.cm (g), 385°C Texmaco Boilers at M/s. NCS Sugars Limited, Andhra Pradesh
34. 1 x 75 TPH, 67 kg/sq.cm (g), 496°C B & W Boiler at M/s. The Jeypore Sugar Company Ltd, Andhra Pradesh
35. 1 x 32 TPH, 32 kg/sq.cm (g), 380°C Texmaco Boiler
1 x 20 TPH, 21 kg/sq.cm (g), 340°C JT boiler at M/s. Trident Sugars Limited, Andhra Pradesh
36. 2 x 16 TPH, 20 kg/cm.sq (g), 340°C KCP boiler inspection at M/s. The Co-operative Sugar Mills Ltd, Chittoor, Kerala
37. 1 x 50 TPH, 32 kg/cm.sq (g), 380°C LIPI boiler at M/s. Simbhaoli Sugar Mills Ltd, Uttar Pradesh
38. 1 x 65 TPH, 42.2 kg/cm.sq (g), 400°C ERGODYNE boiler at M/s. Triveni Engg Works Ltd, Khatauli, Uttar Pradesh
39. 1 x 40 TPH, 32 Kg/cm.sq (g), 380°C LIPI boiler performance analysis for M/s. Simbhaoli Sugar Mills Ltd. Uttar Pradesh
40. 2 x 35 TPH, 46 kg/cm.sq (g), 345°C boiler at M/s. Dwarakesh Sugar Mills Ltd, Uttar Pradesh
41. 1 x 77 TPH, 43 kg/cm. sq (g) 427°C TBW boiler at M/s. SI-AL SBEC Bioenegy Ltd, Uttar Pradesh
42. 2 x 28 TPH, 32 kg/cm.sq (g) 400°C JT Boiler at M/s. SBEC Sugars Ltd Uttar Pradesh
43. 2 x 37.5 TPH, 32 kg/cm.sq (g); 410°C IJT boilers at M/s. Ramgarh Chini Mills Ltd, Uttar Pradesh
44. 1 x 32 TPH and 1 x 30 TPH, 32 kg/sq.cm (g), 385°C Lipi Boilers at M/s. The Pratappur Sugar & Industries Ltd, Uttar Pradesh
45. 1 x 50 TPH, 32 Kg/sq.cm (g), 390°C Texmaco Boiler, 1 x 32 TPH, 32 kg/sq.cm (g), 380°C TBW Boiler at M/s. The United Provinces Sugar Company Ltd, Uttar Pradesh
46. Introduction of bagasse pith and solid waste burning system for M/s. Rohit Pulp & Paper Mills Ltd, Maharashtra
47. Conversion of 70 TPH to FBC of 90 TPH performance analysis for M/s. Gujarat Heavy Chemicals Ltd, Gujarat
48. 5 x 30 TPH, 1 x 25 TPH, 1 x 50 TPH, 21 kg/cm.sq (g) 350°C Texmaco boilers at M/s. Shri Khedut Sahakari Khand Udyog mandli Ltd, Gujarat

49. 1 x 60 TPH, 32 kg/cm. sq (g) 375°C WIL Boiler at M/s. Shree Khedut Sahakari Khand Udyog Mandli Ltd, Gujarat
50. 1 x 70 TPH, 42 kg/cm.sq (g), 420°C KCP Boiler at M/s. KCP Vietnam Industries Limited, Vietnam
51. 1 x 70 TPH, 32 kg/cm. sq (g), 380°C WIL Boiler at M/s. Chadha Sugars Private Limited, U.P
52. 1 x 50 TPH Texmaco, 1 x 32 TPH Thermax, 32 kg/cm.sq (g), 390°C boilers at M/s. The United Provinces Sugar Co. Ltd, Uttar Pradesh
53. 1 x 10 TPH, 12 ata, 275°C JT boiler at M/s. Khaitan India Limited, West Bengal
54. 1 x 65 TPH, 32 kg/cm.sq (g), 380°C WIL boiler at M/s. Kanoria Sugars & Gen. Mfg. Co. Ltd, Uttar Pradesh
55. 1 x 28 TPH, 65 kg/cm.sq (g), 485°C IJT boiler at M/s. Agri Gold Projects Limited, Andhra Pradesh
56. 1 x 40 TPH, 32 kg/cm.sq (g), 390°C Texmaco Boiler at M/s. Balrampur Chini Mills Limited, U.P
57. 2 x 32 TPH, 32 kg/cm.sq (g), 380°C Ergodyne boiler at M/s. Chadha Sugars Private Limited, U.P
58. 2 x 45 TPH, 32 kg/cm.sq (g), 380°C Yoshimine Boiler at M/s. Pelwatte Sugar Co. Ltd, Sri Lanka
59. 1 x 60 TPH, 11 kg/cm.sq (g), 250°C JTE and 1 x 90 TPH , 18 kg/cm.sq (g), 265°C JTA boilers, 1 x 80 TPH, 30 kg/cm.sq, 340°C Yoshimine boiler at M/s.Lopez Sugar Corporation, Philippines.
60. 1 x 60 TPH, 1 x 70 TPH, 67 kg/cm.sq (g), 485°C boilers and 1 x 35 TPH 32 kg/cm.sq (g), 380°C boiler at M/s. Rauzagaon Chini Mills Ltd, U.P
61. 1 x 64 TPH, 42 kg/cm.sq (g), 419°C TBW boiler at M/s. Shree Vaani Sugars and Industries Ltd, Andhra Pradesh
62. 1 x 80 TPH, 67 kg/sq.cm (g) 495°C WIL boiler at M/s. Mula Sahakari Sakkkare Karkhana Niyamit, U.P
63. 1 x 90 TPH, 67 kg/sq.cm (g) 500°C WIL boiler at M/s. Rai Bahadur Narain singh Sugar Mills, Jharkhand
64. 1 x 80 TPH, 87 Kg/Sq.cm (g), 515°C IJT boiler at M/s. Kothari Sugars and Chemicals Ltd, Tamil Nadu
65. 1 x 32 TPH, 45 Kg/Sq.cm (g), 440°C FBC boiler, Thermax make at M/s. Chadha Papers Ltd, U.P

66. 1 x 40 TPH, 45 Kg/sq.cm (g), 420°C FBC Boiler, Thermodyne make at M/s. Nahar Industrial Enterprises Ltd, Punjab
67. 2 x 32 TPH , 32 Kg/Sq.cm (g), 380°C NHEC make boilers at M/s. Wahid Sandhar Sugars Ltd, Haryana
68. 1 x 110 TPH, 25 kg/Sq.cm (g), 380°C JT Africa make boiler at M/s. Mumias Sugar Company Ltd, Kenya
69. 1 x 90 TPH, 87 Kg/Sq.cm (g), 515°C SS Engineers boiler at M/s. GSR Sugars Ltd, Andhra Pradesh
70. 1 x 110 TPH, 87 Kg/Sq.cm (g), 515°C IJT boiler at M/s. NSL Sugars Ltd, Karnataka
71. 1 x 80 TPH, 66 Kg/Sq.cm (g), 510°C Thyssenkrupp boiler at M/s. Lokmangal Sugar Ethanol & Cogeneration Industries Ltd, Karnataka
72. 1 x 70 TPH, 72 Kg/Sq.cm (g), 500°C SS Engineers boiler at M/s. Rai Bahadur Narain Singh Sugar Mills Ltd, Jharkhand
73. 1 x 70 TPH, 66 Kg/Sq.cm (g), 480°C SS Engineers boiler at M/s. Shree Chhatrapati Shahu SSKN, Maharashtra
74. 1 x 140 TPH, 87 Kg/Sq.cm (g), 515°C CVL boiler at M/s. Dalmia Chini Mills, Jawaharpur, Uttar Pradesh
75. 1 x 40 TPH, 21 Kg/Sq.cm (g), 320°C Texmaco boiler at M/s. Triveni Engineering & Industries Ltd, Ramkola Unit, Uttar Pradesh
76. 1 x 36 TPH, 66 Kg/Sq.cm²(g), 485°C AFBC Boiler at M/s. Dhunseri Petrochem & Tea Ltd - Haldia
77. 1 x 90 TPH WIL Boiler, at Shree M/s. Pandurang Sahakar's Sakhar Karkhana Ltd, Maharashtra.
78. 1 x 45 TPH, 45 ATA, 435°C CVL Boiler at M/s. India Glycols Ltd, Noida.
79. 1 x 40 TPH, 32 Kg/Sq.cm²(g), 380°C Buckav Wolf Boiler at M/s. Shree Someshwar SSKL Karnataka.

CONTINUOUS BAGASSE FEED SYSTEM

Cogeneration plants using high pressure modern boilers and TG working in parallel with the grid require continuous bagasse feed for the boiler to maintain the steam pressure constant irrespective of minor interruptions / stoppages in sugar mill. Avant-Garde have successfully developed (pending patent) a continuous bagasse feed system which is working in the following sugar mills.

CONTINUOUS BAGASSE FEEDING SYSTEM HAS BEEN SUPPLIED TO THE FOLLOWING PROJECTS

S. No	Project	Boiler Capacity (TPH)	No. of Fuel Feeders
1	M.R.K.Co-operative Sugar Mills Ltd., Tamilnadu	1 x 70	05
2	Cheyar Co-operative Sugar Mills Ltd., Tamilnadu	1 x 70	05
3	EID Parry (I) Ltd., Nellikuppam, Tamilnadu	2 x 70	08
4	Thiru Arooran Sugars Limited, Unit-1, Tamilnadu	1 x 70	04
5	Arunachalam Sugar Mills Ltd., Tamilnadu	1 x 70	04
6	Supreme Renewable Energy Ltd., Tamilnadu	2 x 100	10
7	Auro Energy Limited, Tamilnadu	1 x 70	04
8	TNPL Offsite at Sakthi Sugars Ltd. Tamilnadu	2 x 85	10
9	Terra Energy Limited, Thirumandankudi, TN	1 x 70	05
10	EID Parry (I) Ltd, Pudukottai, Tamil Nadu	1 x 100	05
11	EID Parry (I) Ltd, Pugalur, Tamil Nadu	1 x 120	05
12	Rajshree Sugars and Chemicals Ltd, Mundiampakkam, TN	1 x 120	05
13	Madras Sugars Ltd, Tamilnadu	1 x 130	05
14	The Jeypore Sugar Co.Ltd, Pothavaram, Andhra Pradesh	1 x 100	05
15	KCP Sugar and Industries Corporation Ltd., Andhrapradesh.	2 x 100	12
16	Sudalagunta Sugars Ltd. Andhra pradesh.	1 x 70	05
17	The KCP Ltd, Lakshmipuram, Andhra Pradesh	1 x 70	05
18	Ganapati Sugar Industries Ltd., Andhra Pradesh.	1 x 75	05
19	GMR Technologies and Industries Ltd, Andhra Pradesh.	2 x 35 2 x 40	06 06
20	Sagar Sugars & Allied Products Ltd., Andhra Pradesh.	1 x 80	05
21	Kakatiya Cement, Sugar and Industries Ltd. Andhrapradesh.	1 x 90	05
22	Nizam Deccan Sugars, Andhra pradesh.	1 x 120	05
23	The Jeypore Sugar Company Ltd, Chagallu, Andhra pradesh.	1 x 70 1 x 75	05 06
24	Nava Bharat Ventures Ltd., Andhra Pradesh	1 x 64	04
25	Shri Prabhulingeshwar Sugar Works Ltd., Karnataka	2 x 45	06
26	Gem Sugars Ltd., Karnataka.	1 x 90	06
27	Bannari Amman Sugars Ltd, Nanjangud, Karnataka	1 x 80 1 x 120	05 05
28	The Mysore Sugar Company, Karnataka	2 x 80	08

S. No	Project	Boiler Capacity (TPH)	No. of Fuel Feeders
29	Shree Doodhaganga Krishna SSKN, Karnataka.	1 x 125	05
30	Shree Renuka Sugars Ltd., Athani, Karnataka.	1 x 80	07
31	Triveni Engineering and Industries Ltd., Deoband, U.P.	1 x 120	05
32	Akbarpur Chini Mills Ltd., U.P.	2 x 80	12
33	Mankapur Chini Mills Ltd., U.P.	2 x 90	08
34	Agauta Sugars Ltd., U.P.	1 x 70	05
35	Haidargarh Chini Mills Ltd, U.P.	1 x 120	10 (5W+5S)
36	Triveni Engineering and Industries Ltd, Khatauli, U.P.	2 x 120	10
37	Rauzagaon Chini Mills, U.P.	1 x 35 1 x 70 1 x 75	03 05 06
38	Tikaula Sugar Mills Ltd, U.P.	1 x 80	05
39	Chilwaria Sugars, U.P.	1 x 80	06
40	Upper Ganges Sugar Industries Ltd, U.P.	1 x 120	05
41	Ramgarh Chini Mills, U.P.	1 x 120	05
42	KCP Vietnam Industries Ltd, Vietnam.	2 x 70	10
43	Shree Renuka Sugars Ltd., Manouli, Karnataka.	1 x 80	07
44	Aldebran Energia Del Gaudalquivir S.L.Spain	1 x 28	03
45	Rajshree Sugars and Chemicals Ltd., Gingee, Tamil Nadu	1 x 110	05
46	GSR Sugars Limited., Andhra Pradesh	1 x 90	04
47	Mumias Sugar Company Ltd., Kenya	1 x 170	06
48	Lopez Sugar Corporation, Philippines	1 x 100	06
49	Baghauli Sugars Ltd., U.P	1 x 80	06
50	EID Parry (I) Ltd., Pettaivaithalai, Tamil Nadu	1 x 100	05
51	Jai Mahesh Sugar Industries Ltd., Maharashtra	1 x 110	05
52	Mitr Phol Sugar Corpn. Ltd, Thailand	1 x 95	04
53	Dharani Sugars & Chemicals Ltd, Tamil nadu	1 x 110	05
54	Dhanalaksmi Srinivasan Sugars, Tamil Nadu	1 x 110	05
55	Krishnaveni Sugars Ltd, Andhra Pradesh	1 x 110	05
56	Vijayanagar Sugar Pvt Ltd, Karnataka	1 x 120	05
57	Hemarus Technologies Ltd, Maharastra	1 x 110	05
58	Gangakhed Sugar&Energy Pvt Ltd, Maharastra	1 x 150	06
59	Shree Someshwar SSKL, Maharastra	1 x 100	05
60	Bannari Amman Sugars Ltd, Thiruvannamalai	1 x 135	05
61	Siruguppa Sugars and Chemicals Ltd, Karnataka	1 x 110	05

S. No	Project	Boiler Capacity (TPH)	No. of Fuel Feeders
62	Fionchaa Sugar Factory, Ethiopia	2 x 110	10
63	Veasons energy systems Pvt.Ltd (TRR Sugars, Thailand)	3 x 200	21
64	Jamkhandi Sugars Limited, Karnataka	1 x 90	5
65	Godavari Bio retineres Ltd, Karnataka	1 x 120	5
66	Shree Datta SSK Ltd, Karnataka	1 x 180	7
67	Madras Sugars Ltd, Thirukovilur	1 x 130	5
68	Chincholi Sugars & Bio Industries Ltd, Karnataka	1 x 120	5
69	Sukhothai Bio Energy Co.Ltd, Thailand	3 x 150	15
70	Ingenio Magdalena, S.A., Guatemala	1 x 220	8
71	Ingenio Palo Gardo, S.A., Guatemala	1 x 165	6
	Total	93 Boilers	470 Feeders

AVANT-GARDE EXPERIENCE IN INTRODUCTION OF PITH FIRING SYSTEM

Paper plants use depithed bagasse for pulp production. The pith generated is a waste product and possess problems in disposing and creates pollution. Avant-Garde has successfully designed and implemented pith firing systems in existing boilers by modifying the water wall openings and introducing burning system. The following projects have been modified by Avant-Garde for burning pith.

S. No	Project	Location
1	Sri Seshasayee Paper Board	Tamil Nadu
2	Tamil Nadu Newsprint Limited, Pugalur	Tamil Nadu
3	Tamil Nadu Newsprint Limited, Kurunkulam	Tamil Nadu
4	Tamil Nadu Newsprint Limited, Pettavaithalai	Tamil Nadu
5	Tamil Nadu Newsprint Limited, Mohanur	Tamil Nadu
6	Tamil Nadu Newsprint Limited, Appakkudal	Tamil Nadu
7	Ponni Sugars & Chemicals Ltd	Tamil Nadu
8	Sri Vindya Paper Mills Ltd	Maharashtra

MODIFICATION OF BOILER FOR 100% COAL FIRING

1. 140 TPH, 87 ata boiler at M/s.Dalmia Chini Mills, Jawharpur
2. 83 TPH 64 ata boiler at M/s.Jeypore Sugar, Andhra Pradesh.
3. 90 TPH 87 ata boiler at M/s.GSR Sugar, Andhra Pradesh.
4. 100 TPH 32 ata boiler at M/s.Lopez, Philippines.
5. 120 TPH 87 ata boiler at M/s.Haidargarh Chini Mills.
6. 130 TPH 87 ata boiler at M/s.BASL, Karnataka

OTHER SERVICES PROVIDED BY AVANT-GARDE FOR SUGAR PLANT

- Turnkey Consultancy services for Sugar Plant with Co-Generation System
- Complete Sugar Plant Process Piping
- Trouble Shooting in Boiler and TG area
- Sugar Plant Automation

OTHER AREAS OF SPECIALISATION

- Stress Analysis
- Waste Heat Recovery
- Power & Process Piping
- Plant Layout
- Power Plant Heat Balance
- Energy Conservation
- Detailed Engineering in various disciplines

GROUP COMPANY

- Avant-Garde Systems and Controls (P) Limited, Chennai.
- Avant-Garde Engineers & Consultants FZC, Sharjah, U.A.E

AFFILIATIONS & MEMBERSHIP

- CEAI - Consulting Engineers Association of India (CEAI is member of **FIDIC International Federation of Consulting Engineers**)
- Registered with Indian Renewable Energy Development Agency (IREDA)
- Enlisted with Power Finance Corporation of India and Asian Development Bank
- IIT, Chennai - Industrial Associateship Scheme (IAS) Membership and Library Membership
- Anna University - Industrial Associateship Scheme (IAS) Membership and Library Membership
- BIS - Bureau of Indian Standards Library Membership
- Institute of Engineers Fellow Membership - Directors (Chartered Engineers)
- Indian Chamber of Commerce and Industry (ICCI)
- Madras Chamber of Commerce and Industry (MCCI)
- Indian Wind Power Association
- Indian Welding Society
- Institute of Fire Engineers
- Bureau of Energy Efficiency (BEE)
- Maharashtra Energy Development Agency
- South Indian Sugarcane and Sugar Technologists Association
- Sugar Technologist Association of India (STAI)
- Engineering Export Promotion Council (EEPC)

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