1

PROJECT REPORT

SARDHANA PAPERS PRIVATE LIMITED

SUMMARY

1]

NAMEOFTHEUN

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T

M/SSARDHANA PAPERS PVTLTD

2]

CONSTITUTION

PRIVATELTDCOMPANY

3]

GSTIN

09

AABCS9548K1ZP

4]

ACTIVITIESPROPOSED

MANUFACTURING OF KRAFT PAPER

5] LOCATION

REGD. OFFICE

OPP.132 KVA POWER SUB STATION

MEERUT ROAD SARDHANA- 250342

DISTT.- MEERUT ,U.P.

FACTORY

OPP.132 KVA POWER SUB STATION

MEERUT ROAD SARDHANA- 250342

DISTT.- MEERUT ,U.P.

NAME& AGE OF DIRECTORS SHRI SAURABH GUPTA, AGE-54

6]

SHRI SHIVA RASTOGI ,AGE-28

7

CREDIT FACILITIES PROPOSED

]

TERM LOAN FOR BOILER & TURBINE RS. 25.00 Crores



PARTICULARS OF THE PROJECT

Cost of Project and Means of Finance

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.No. |  |  |  |  |
|  | Application of Funds | Existing | Proposed | Total Cost  (in crores) |
| 1 | Land( Already Owned) | 0.00 | 0.00 | 0.00 |
| 2 | Building | 1.46 | 0.00 | 1.46 |
| 3 | Plant & Machinery | 35.40 | 0.00 | 35.40 |
| 4 | Boiler & Turbine | 0.00 | 30.00 | 30.00 |
| 5 | Interest During Construction Period | 2.73 | 1.19 | 3.92 |
|  |  | 39.59 | 31.19 | 70.78 |
|  | Sources of Funds |  |  |  |
| 6 | Share Capital | 0.00 | 0.00 | 0.00 |
| 7 | Term loan from Bank | 30.00 | 25.00 | 55.00 |
| 8 | Unsecured Loans / Cash Accruals | 9.59 | 6.19 | 15.78 |
|  | Total | 39.59 | 31.19 | 70.78 |

Legal, Statutory and License Details

|  |  |  |
| --- | --- | --- |
|  | 1. Certificate of Incorporation (COI) | U21011UP1985PTC007097 |
|  | 2. Permanent Account Number (PAN) | AABCS9548K |
|  | 3. Goods and Service Tax (GST) | 09AABCS9548K1ZP |
|  | 4. Tax deduction Account Number (TAN) | MRTS00324C |
|  | 5. Factory Act License Number | UPFA7000246 |
|  | 6. MAP | Approved by Gram Panchyat dated 03.01.2017 |
|  | 7. Pollution |  |
| - | Air | Approved |
| - | Water | Approved |
|  | 8. MSME | UDYAM-UP-56-0001040 |
|  | 9. Boiler | Approved ( Covered in CTO) |
|  | 10. Fire | Not Required as it is a existing unit |
|  | 11. Electricity | Permanent Connection of 2000KVA |
|  | 12. Water/ submersible pump permission | Obtained |
|  | 13. CTE (Consent to Establish) Pollution | Not Required As already Established Unit |
|  | 14. CTO (Consent to Operate) Pollution | Applied For |
|  | 15. Installed Capacity | 86000 MT |
|  | 16. Licensed Capacity | 86000 MT |
|  | 17. Non Encumberence Certificate | Approved |

Project Implementation Schedule

Project Implementation Schedule is as follows: -

Term Loan Repayment 7 Years TL Amount Rs.25.00 crores, Repayment Start from April 2026.

|  |  |  |  |
| --- | --- | --- | --- |
| Land |  |  | Already Acquired |
| Boiler & Turbine |  |  |  |
| - Quotation | o o | Start Date  End Date | March 2024  March 2024 |
| - Order Place Month | o o | Start Date End Date | April 2024 July 2024 |
| - Machinery acquisition | o o | Start Date End Date | July 2024  January 2025 |
| Trial Run |  |  | March 2025 |
| Commercial Production |  |  | April 2025 |

INTRODUCTION: -

M/s Sardhana Papers Pvt Ltd is a Private Limited Company. The Directors in the company are as under:

1. Shri Saurabh Gupta s/o Late Shri Ram Kishore Gupta is aged 54 years is B.E. (Production) and is engaged in the technical management of the unit. He has highly contributed his talent in the capacity expansion and diversification of product mix. Now the unit is capable to adjust its production programme according to the market trend and needs. ( PAN- ACEPG1291P)

1. Shri Shiva Rastogi S/o Praveen Kumar Rastogi is aged about 28 years is Graduate, he join Sardhana Papers Pvt Ltd since 2020, it is to his credit that he will maintain a consistent growth in the overall business of the company.( PAN- CKUPR1307M)

All the Directors of the company are highly respectable persons in the social circle of Meerut. They all are capable and man of means, all of them are assessed to tax and enjoy a wide financial base as apparent from their net worth mentioned above. All the Directors of the company are well qualified and are managing the company based on professional management concept.

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**CHAPTER–1**

**HIGHLIGHTS OF THEPROJECTS**

1. NAME OF THE UNIT : SARDHANA PAPERS PVT LTD.

1. CONSTITUTION : PRIVATE LIMITEDCOMPANY

1. DATEOFINCORPORATION : 26.03.1985

1. PROPOSEDPROJECT : MANUFACTURING OF KRAFT PAPER

1. ADDRESS

FACTORY : OPP.132 KVA POWER SUB STATION

MEERUT ROAD SARDHANA- 250342

DISTT.- MEERUT ,U.P.

REGISTEREDOFFICE : OPP.132 KVA POWER SUB STATION

MEERUT ROAD SARDHANA- 250342

DISTT.- MEERUT ,U.P.

1. SECTOR OF INDUSTRY : MSME

1. STATUS : OPP.132 KVA POWER SUB STATION

MEERUT ROAD SARDHANA- 250342

DISTT.- MEERUT ,U.P.

# **BRIEF BACKGROUND ABOUT THE PROJECT**

M/s Sardhana Papers Private Limited (SPPL), a company limited by shares has been incorporated on 26th March, 1985. The Company has been into the business of Manufacturing of Kraft Paper since 1987. M/s SPPL is one of the oldest manufacturer of Kraft Paper in Meerut. The company’s product/kraft paper is in high demand for Kraft Paper and production capacity of current machine/plant is not able to match the same.

Hence the management in FY 22-23 started installation of new Plant & Machineries (along with existing plant) to meet the increased demand of product. The new machines to be installed is of latest technology which will help in increasing the production and shall also reduce the overall cost of production due to higher production. The working on this new plant has already been started from December 2022 and company has also availed a term loan of Rs. 30 Crores from Punjab National Bank for the same on 29.12.2022.

Working on this new plant & machineries has already been started and order placement of machineries will be completed by May 2024. Commercial production from this machinery will start from April 2025. As of now company has started civil work and has paid advances to vendors of machineries to whom final order of machineries has been placed.

The company has paid total advance amounting to Rs1158.03 Lacs till 29th February 2024 and has utilized Rs.951.17 Lacs from the Term Loan of Rs. 30 Crores already sanctioned.

Now along with this new plant company has also decided to install a new Boiler and Turbine machine for Inhouse production of electricity for cost saving purpose.

CHAPTER–2

BENEFITS AND ROLE OF TURBINE IN PAPER INDUSTRY

Benefits of Installing the turbine for Inhouse Captive Generation

It will have the following benefits-:

1. This will help company to minimise the overall electricity cost of company to fixed charge only which is one the major expense in production of Kraft Paper as company will not be purchasing any electricity from Government grid. Fixed Charges for electricity connection of company will be only Rs.74,82,000 p.a. only (2000 KVA Load \* 311.75 per KVA\*12 Months).

1. Also due to uninterrupted power supply with the help of turbine, company will save undue tripping of machine which will help increasing the production of both existing as well as new plant with at least 15-20%.

1. The quality of steam of turbine boiler is better than regular boiler which helps in enhancing paper dryiness & overall quality of paper. This will help in getting better sale rate of finished product.

1. In NCR Region Coal consumption in boilers is ban except for the captive power generation boiler. Hence if we install turbine we will be eligible for coal quota which is received from government authorities at lower rates and hence overall profitability of company will increase.

ROLE OF TURBINE IN PAPER INDUSTRY

1. Power Generation: Steam turbines in the paper industry are primarily used for power generation. Paper mills require significant amounts of energy for various processes, such as pulping, refining and drying. Steam turbines in paper industries provide a reliable source of electricity that can be harnessed to run machinery, lighting, and more.

1. Steam Generation: In addition to producing electricity, steam turbines in paper industry are essential for generating steam used in the paper-making process. This steam is used in the drying of paper, which is a critical step in production. Steam turbines in paper industries ensure a constant supply of high-pressure steam, helping maintain the quality and efficiency of paper production.

1. Cogeneration: Many paper mills employ a method called cogeneration, where steam turbines not only generate electricity but also produce heat. This heat is utilized in the drying process, reducing the need for additional energy sources and increasing overall energy efficiency.

1. Sustainability and Efficiency: The paper industry is under constant pressure to reduce its environmental footprint. Steam turbines in paper industry play a crucial role in helping paper mills become more sustainable and energy-efficient.

1. Waste Heat Recovery: Steam turbines can recover and utilize waste heat from the paper-making process, further increasing energy efficiency and reducing waste.

1. Combined Heat and Power (CHP): By using steam turbines for both electricity generation and steam production, paper mills can minimize their environmental impact and reduce reliance on fossil fuels.

1. Renewable Energy Integration: Many paper mills are integrating renewable energy sources, such as biomass or waste-to-energy processes, into their operations. Steam turbines can adapt to these energy sources, making them a versatile choice for sustainable production.

CHAPTER–3

ANALYSIS OF MONETARY BEINFIT FROM TURBINE TO THE COMPANY

Currently company is consuming 350 units of electricity to produce per MT of Paper & current electricity rates are around Rs.6.50 to Rs.7.00 per unit from public electricity grid. So current electricity cost per tonne of paper is around Rs. 2350 PMT. After installation of Turbine our electricity consumption from government grid would be NIL and all the consumption will be through captive production thus cost will be reduced to fixed charge which are around Rs.74,82,000 (2000 KVA Load\*311.75/ KVA\*12 months) only.

Since Turbine will require steam to operate thus the company is installing a New Boiler which has a capacity to produce around 40 Tons of Steam per hour. So there will be an increase in fuel cost and electricity charges from the public grid shall be minimized to fixed charges only. Currently company is incurring fuel cost of around Rs.1300 to produce per MT of paper. This cost will increase by 30-40% thereby increasing fuel Cost to around Rs.1800 PMT. So there is an extra cost of Rs. 500 PMT.

So approximate net savings due to Installation of turbine and boiler for FY 2025-26 will be as follows-:

|  |  |
| --- | --- |
| Financial Year | 2025-26 |
| Capacity Utilization | 80% |
| Production ( Total Capacity =86000 MT\*80%) | 68800 MT |
|  |  |
| Calculation of Saving Power Cost |  |
| Power Cost PMT if no Turbine is installed | Rs. 2350 per metric ton (PMT) |
| Total Power Cost if no Turbine is installed ( Rs. 2350 PMT\* |  |
| 68800 MT)- A | Rs. 16,16,80,000.00 |
| Power Cost if Turbine is installed(Fixed Charges only )  Calculation of Fixed Charges= 2000 KVA Load\*311.75/ |  |
| KVA/month\*12 months= Rs.74,82,000- B | Rs. 74,82,000.00 |
| Savings in Power Cost (A-B)= C | Rs. 15,41,98,000.00 |
|  |  |
| Calculation of Increase in Fuel Cost |  |
| Fuel Cost PMT if no Turbine is installed | Rs. 1300 per Metric Ton (PMT) |
| Total Fuel Cost if no Turbine is installed ( Rs. 1300 PMT\* |  |
| 68800 MT)- D | Rs. 8,94,40,000 |
| Fuel Cost PMT if Turbine is installed ( Fuel Cost increased by | Rs. 1800 per metric ton |
| around 30-40% after installation of Turbine) | (PMT) |
| Total Fuel Cost PMT if Turbine is installed ( Rs. 1800 PMT\* |  |
| 68800 MT)- E | Rs.12,38,40,000 |
| Increase in Fuel Cost (E-D)=F | Rs. 3,44,00,000 |
|  |  |
| Savings F-C (Savings in Power cost less Increase in Fuel |  |
| Cost) | Rs. 11,97,98,000.00 |
| Installment (Principal + Interest)t of Rs. 25 Crores Proposed |  |
| Term Loan in 2026-27 | Rs. 4,21,74,996.00 |
| Net Savings/ Surplus to company after payment of |  |
| Installment of Term Loan | Rs. 7,76,23,004.00 |

CHAPTER–4

INFORMATION ABOUT PROMOTERS

The company has been promoted by Shri Saurabh Gupta S/o Late Shri Ram Kishore Gupta & Shri Shiva Rastogi S/o Shri Praveen Kumar Rastogi are well established businessman. They are successfully running their company. Shri Saurabh Gupta & Shri Shiva Rastogi are young entrepreneurs and has acquired good knowledge & experience in paper industry.

The descriptions, name & address of Promoters/Directors are asunder:

1.

|  |  |  |
| --- | --- | --- |
| a. | Name | Shri Saurabh Gupta |
| b. | Father's Name | Late. Shri Ram Kishore Gupta |
| c. | Date of Birth | 24.02.1968 |
| d. | Sex (Male/Female/Third Gender) | Male |
| e. | Relationship with chief promoter | Self |
| f. | Whether belongs to Scheduled Castes/Scheduled Tribes/Minority community | No |
| g. | Are you Ex-Servicemen | No |
| h. | Residential Address Temporary | 315-C, Palm View road, Sheel Kunj, Meerut-250001 |
| i. | Residential Address Permanent | 315-C, Palm View road, Sheel Kunj, Meerut-250001 |
| j. | PAN No | ACEPG1291P |
| k. | Mobile No | 8755301326 |
| l. | Telephone No-Office | - |
| m. | Telephone No.- Residence | - |
| n. | Academic qualifications | Graduate |
| o. | Professional qualifications | B-Tech (B.E.Production) |
| p. | Experience | 34 Years |
| q. | If associated as proprietor/partner/director/ shareholder with concerns other than the applicant unit, mention name of the unit (please furnish detads of concern separately in Annexure 4) | Shareholders in M/s Sardhana  Spinning Mills Pvt Ltd,  Shareholders in M/s Ghanshyam  Papers Pvt Ltd |
| r. | Functional responsibilities in above mentioned (at Sr. No. q) unit | Overall Management |
| s. | Functional responsibility in the applicant enterprise | Overall Management |
| t. | Reasons for joining establishing the unit (please mention aboutmotivating factors) | Family Business |
| u. | Family details Spouse & children (age, educational background &present occupation) | Wife and 1 Son and 1 Daughter |
| v. | Details of Past Experience of Entrepreneurship | 34 Years in paper Industry |
| w. | Major Skills/Area of Expertise | Management |
| y. | Any other relevant information | NIL |

2.

|  |  |  |
| --- | --- | --- |
| a. | Name | Shri Shiva Rastogi |
| b. | Father's Name | Shri Praveen Kumar Rastogi |
| c. | Date of Birth | 07-12-1994 |
| d. | Sex (Male/Female/Third Gender) | Male |
| e. | Relationship with chief promoter | Self |
| f. | Whether belongs to Scheduled Castes/Scheduled Tribes/Minoritycommunity | No |
| g. | Are you Ex-Servicemen | No |
| h. | Residential Address Temporary | 3C, Pocket, B-6, MayurVihar, Phase -3, Delhi-110096 |
| i. | Residential Address Permanent | 3C, Pocket, B-6, MayurVihar, Phase -3, Delhi-110096 |
| j. | PAN No | CKUPR1307M |
| k. | Mobile No | 9897526226 |
| l. | Telephone No-Office | - |
| m. | Telephone No.- Residence | - |
| n. | Academic qualifications | Graduate |
| o. | Professional qualifications | - |
| p. | Experience | 4 Years |
| q. | If associated as proprietor/partner/director/ shareholder with concems other than the applicant unit, mention name of the unit (please furnish detads of concern separately in Annexure 4) | NIL |
| r. | Functional responsibilities in above mentioned (at Sr. No. a) unit | Overall Management |
| s. | Functional responsibility in the applicant enterprise | Overall Management |
| t. | Reasons for joining establishing the unit (please mention aboutmotivating factors) | Family Business |
| u. | Family details Spouse & children (age, educational background &present occupation) | Wife and 1 Daughter |
| v. | Details of Past Experience of Entrepreneurship | 4 Years |
| w. | Major Skills/Area of Expertise | Management |
| x. | Financial capital contribution in all the existing enterprises/ businesses in which involved as promoter/ director partner proprietor etc (face value only) | NIL |
| y. | Any other relevant information | NIL |

CHAPTER – 5

WORKING PROCESS OF TURBINE

Steam Turbines

Steam turbines are a mature technology and have been used since the 1880s for electricity production. Most of the electricity generated in the United States is produced by steam turbines integrated in central station power plants. In addition to central station power, steam turbines are also commonly used for combined heat and power (CHP) installations (see Table 1 for summary of CHP attributes).

Table 1. Summary of Steam Turbine Attributes for CHP

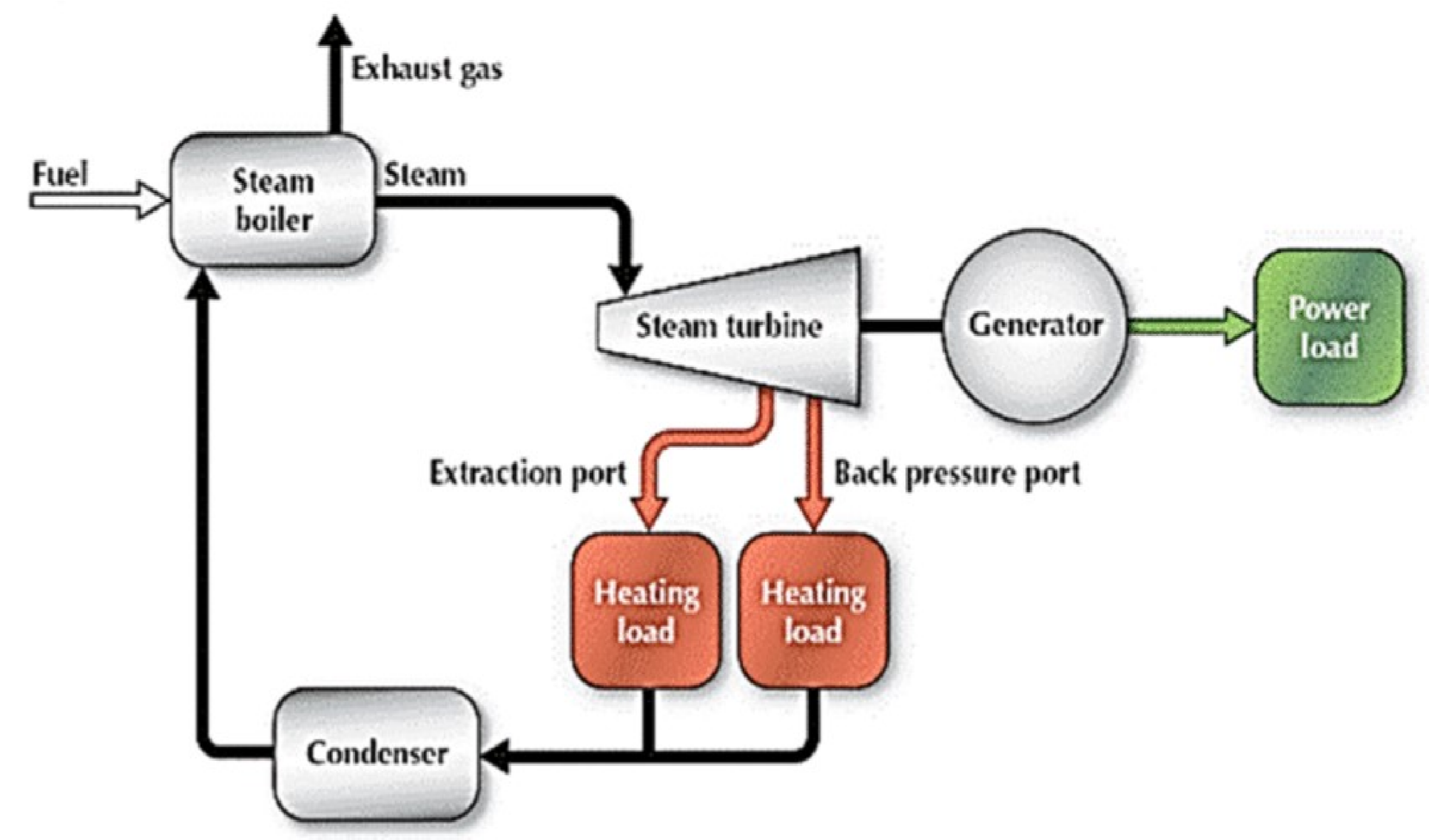
|  |  |
| --- | --- |
| Size range | Steam turbines are available in sizes from under 100 kW to over 250 MW. |
| Thermal output | CHP configurations use backpressure or extraction steam turbines to generate power and thermal energy. Backpressure steam turbines produce low pressure steam while extraction turbines deliver both low pressure and medium pressure steam. |
| Part-load operation | Steam turbines have relatively good part-load performance, but efficiency does decline as power output is reduced. |
| Fuel | Boilers are commonly used to generate steam required for steam turbines, and boilers can utilize a wide range of fuels, including natural gas, oil, coal, and biomass. For CHP applications, steam turbines are often implemented when there is access to a low cost opportunity fuel that can be combusted in a boiler to generate steam. |
| Reliability | Steam turbines are a mature technology with excellent durability and reliability. |
| Other | Steam turbines are typically designed to deliver relatively large amounts of thermal energy with electricity generated as a byproduct of heat generation. Overall CHP efficiencies can reach or exceed 80%. |

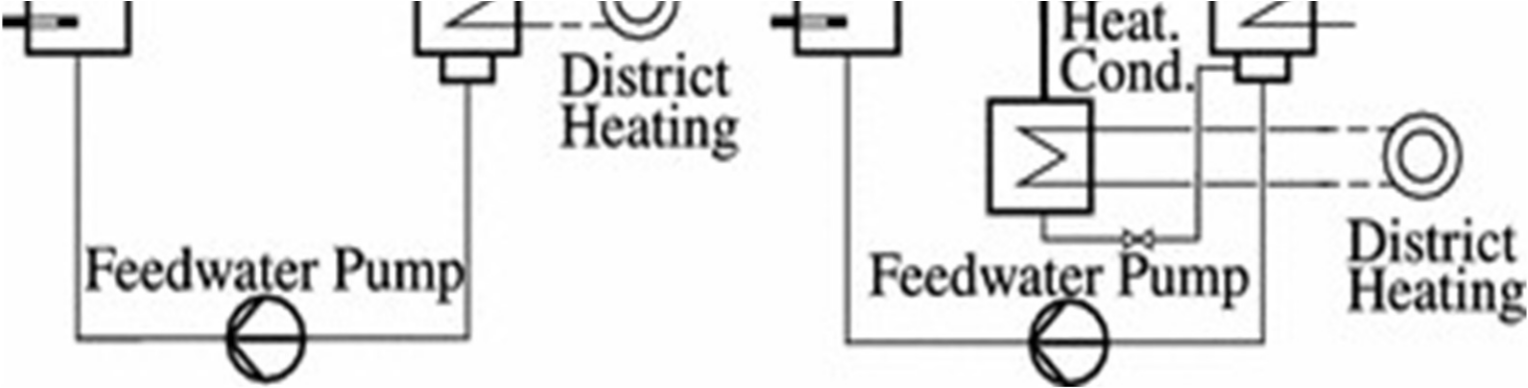
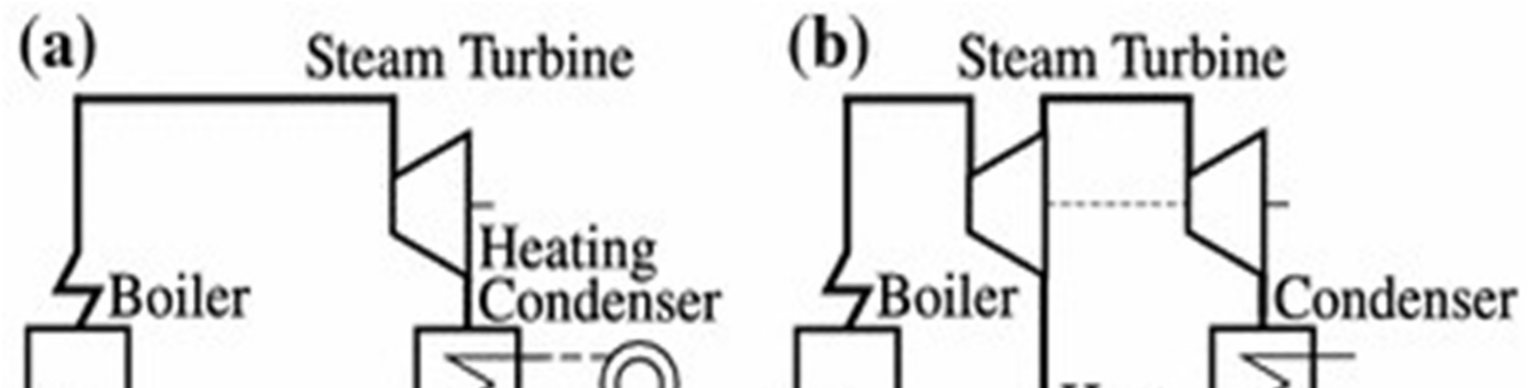
Technology Description

A steam turbine is driven with high pressure steam produced by a boiler or heat recovery steam generator (HRSG). Unlike gas turbines or microturbines, steam turbines do not directly consume fuel. Rather, the fuel driving the process is the fired boiler or plant equipment that produces heat for the HRSG (e.g., a gas turbine).

Operation of Steam Turbine

Steam turbines operate on the Rankine cycle (see Figure 1). In this thermodynamic cycle, water is pumped to high pressure and then heated to generate high pressure steam. The high pressure steam is then expanded through a steam turbine where steam energy is converted to mechanical power that drives an electrical generator. For CHP configurations, low pressure steam that exits the steam turbine is then available to satisfy on-site thermal needs. Condensed liquid is then returned to the pump, and the cycle is repeated. Steam turbines for CHP applications are classified as either non-condensing or extraction. A non-condensing turbine, also referred to as a backpressure turbine, exhausts steam directly to an industrial process or to a steam distribution system. In a backpressure turbine, common pressure levels are 50, 150, and 250 psig, with lower pressures often used in district heating systems; higher pressures are more typical for industrial processes. An extraction turbine has one or more openings in its casing to extract steam at an intermediate pressure. The extracted steam is then used in CHP configurations that require steam pressures higher than pressures available from backpressure steam turbines. Regardless of steam turbine type – backpressure or extraction – the primary objective of most steam turbine CHP systems is to deliver relatively large amounts of thermal energy, with electricity generated as a byproduct of heat generation. Therefore, most steam turbine CHP systems are characterized by low power to heat ratios, often below 0.2.





Performance Characteristics

Table 2 shows performance characteristics for three representative backpressure steam turbines used in CHP applications with electric power capacities of 500 kW, 3 MW, and 15 MW. As indicated, all three systems have overall efficiencies near 80%3 and power to heat ratios of 0.1 or lower. High overall efficiencies and low power to heat ratios are common characteristics for steam turbines configured for CHP applications.

Table 2. Steam Turbine Performance Characteristics When Integrated with a Natural Gas Boiler

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Description | |  | System |  |
| 1 | 2 | 3 |
| Net Electric Power (kW) | | 500 | 3,000 | 15,000 |
| Fuel Input  (MMBtu/hr, HHV)4 | | 27.2 | 208.0 | 700.1 |
| Steam Flow (lbs/hr) | | 20,050 | 152,600 | 494,464 |
| Steam Inlet Pressure (psig) | | 500 | 600 | 700 |
| Steam Inlet  Temperature (°F) | | 550 | 575 | 650 |
| Steam Outlet  Pressure (psig) | | 50 | 150 | 150 |
| Steam Outlet  Temperature (°F) | | 298 | 373 | 380 |
| Useful Thermal  (MMBtu/hr) | | 20.0 | 155.5 | 506.8 |
| Power to Heat  Ratio5 | | 0.086 | 0.066 | 0.101 |
| Electric (%, HHV) | Efficiency | 6.3% | 4.9% | 7.3% |
| Thermal (%, HHV) | Efficiency | 73.3% | 74.8% | 72.4% |
| Overall (%, HHV) | Efficiency | 79.6% | 79.7% | 79.7% |