

# STEAM HEADER AND NEAR BOILER PIPING DESIGN



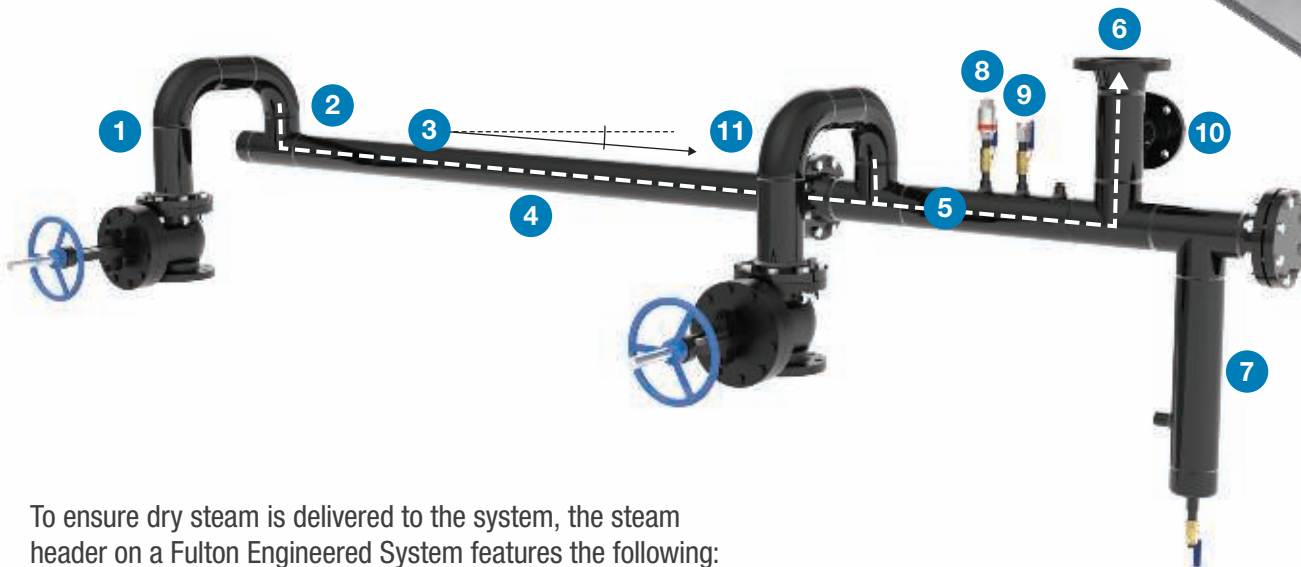
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## A KEY COMPONENT OF AN EFFICIENT MODULAR STEAM BOILER SYSTEM

Fulton's Engineered Steam Systems ensure that a steam boiler system will operate at its peak efficiency. Benefits of factory prefabricated systems include:

- ▶ Fast tracked project management and delivery
- ▶ Single point design responsibility
- ▶ High efficiency, low operating costs
- ▶ Long equipment life
- ▶ Fast on site commissioning

As part of a modular steam boiler solution, a well-designed steam header is a critical component that provides significant user benefits including high quality dry steam, increased system efficiency and reduced maintenance.



To ensure dry steam is delivered to the system, the steam header on a Fulton Engineered System features the following:

1. Vertical rise from boiler
2. Entrance to main header is from the top
3. Main header is sloped 1/2" per 10' towards drop leg
4. Main header is sized for maximum of 4,500ft/min at all operating conditions
5. All steam flow is in one direction with no opposing flows
6. Steam outlet is at the top and at end of the header
7. Full size, end of line, drop leg with trap connection
8. Vacuum breaker is installed at a high point on the header
9. Pressure transducer tapping for boiler sequencing control
10. Steam connection to feedtank preheat is at a high point in the header
11. Steam Header is factory leak tested for quality assurance