



**INVENO**  
**ENGINEERING**

STEAM SYSTEM  
PERFORMANCE PROGRAM

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# INVENO ENGINEERING

## » STEAM SYSTEM PERFORMANCE PROGRAM

- Is your **steam system** meeting today's industrial benchmarks, or is it falling short of your key performance indicator (KPI) targets?
- How **RELIABLE** is the **steam system**? Are you experiencing too many system problems and downtime without knowing the cause?
- How can you *break this cycle*?

Most plants lack the in-house knowledge and resources necessary to answer these questions. This is why they turn to **Invenco Engineering** steam system engineers.

Our **Steam System Performance (SSP)** program helps plants measure their current operations, take steps to optimize their systems, and benchmark progress toward their goals. Through the SSP program, experienced Invenco engineers monitor the effectiveness of a plant's steam system management strategies, determine the gap between actual and targeted steam system performance, and evaluate plant operational efficiency.

### A Comprehensive Assessment and Measurement Program

The SSP program is an on-site engineering assessment of all aspects of an organization's steam systems. The program thoroughly measures the performance of all steam system components, including:

- *boilers,*
- *heat recovery systems,*
- *steam distribution systems,*
- *end users,*
- *condensate systems,*
- *feedwater systems,*
- *controls, and*
- *instrumentation.*

The results of the SSP are provided in a detailed report that offers a five-priority schedule of action items and recommendations for correction and improvements in the following areas:

- *reliability,*
- *safety,*
- *code compliance,*
- *operational practices,*
- *inspection practices,*
- *discrepancies,*
- *documentation, and*
- *training programs.*

With these objectives in mind, plants can create a **methodical improvement strategy**.

# How the SSP Program Works



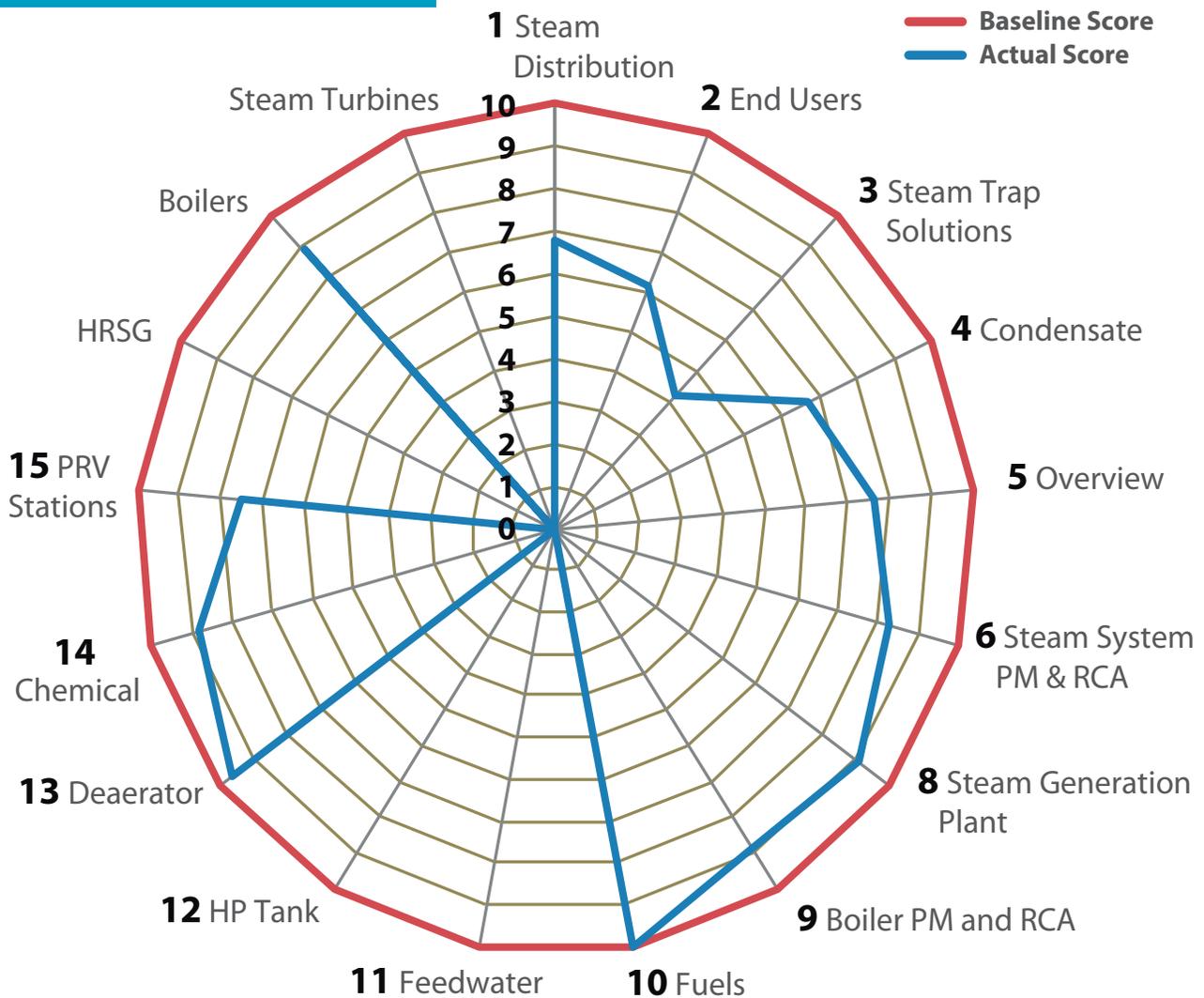
The SSP program begins with a high level of communication between the plant team and the **Invenco Engineering** team to set up the objectives and goals for the SSP program. An Invenco Engineering team then conducts an on-site engineering review of the steam and condensate system. Our engineers follow and far exceed the ASME EA-3-2009 guidelines for Steam System Assessments.

We use a combination of field-proven technical questionnaires, software systems, and technology to review every aspect of steam systems. Invenco Engineering's proprietary software enables us to conduct an in-depth analysis of the plant's combustion efficiency, steam cost, flash steam, thermal losses,

steam system thermal cycle efficiency, and component performance as well as perform root cause analysis and troubleshoot problems.

Our field engineers work directly with your management, operations, engineering, safety, environmental, maintenance, and recordkeeping teams. Within days of completing the on-site SSP program, we will provide a comprehensive written report that includes our measurements, qualitative findings, recommendations, data for benchmarking, and a comprehensive road map to start optimizing the system.

## SUMMARIZED KPI SCORE

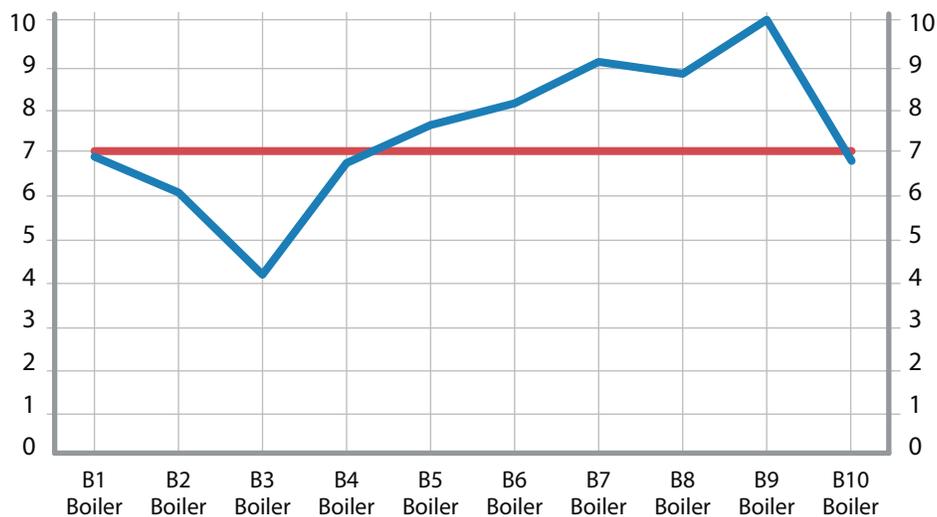




## The SSP Process Never Ends

To keep steam systems striving for peak conditions and ensure that the road map is being followed to achieve optimal performance, the **Invenco Engineering** validation program conducts reassessments every two to three years. But optimizing a steam and condensate system requires ongoing completion of the corrections and implementing the recommendations. Our validation process starts six months after the initial SSP on-site program, when an Invenco Engineer visits the site to review the plant's progress against the SSP program. We are committed to ensuring our clients attain continuous improvement by setting realistic milestones and offering reliable guidance to accomplish them.

### BOILER KPI SCORE



## Our Value

Plants use our SSP program to benchmark their operations against other companies' facilities. We deliver value to plant management in many forms:

- *offering objective insight into steam system operations;*
  - *leveraging existing best practices across the organization;*
  - *identifying specific problems and standardizing solutions;*
  - *measuring results against baselines, KPIs, and best practices;*
  - *evaluating recommendations in light of*
- *payback to plant;*
  - *improving overall system operations, reliability, safety, and in-plant documentation procedures;*
  - *reducing breakdowns and downtime and thus improving reliability;*
  - *lowering energy costs; and*
  - *decreasing environmental impact and environmental emissions compliance costs.*

**Contact us today** to learn how Invenco Engineering's SSP program can help you optimize your company's investment in your steam system.