

Energy Audits and System Optimization Services





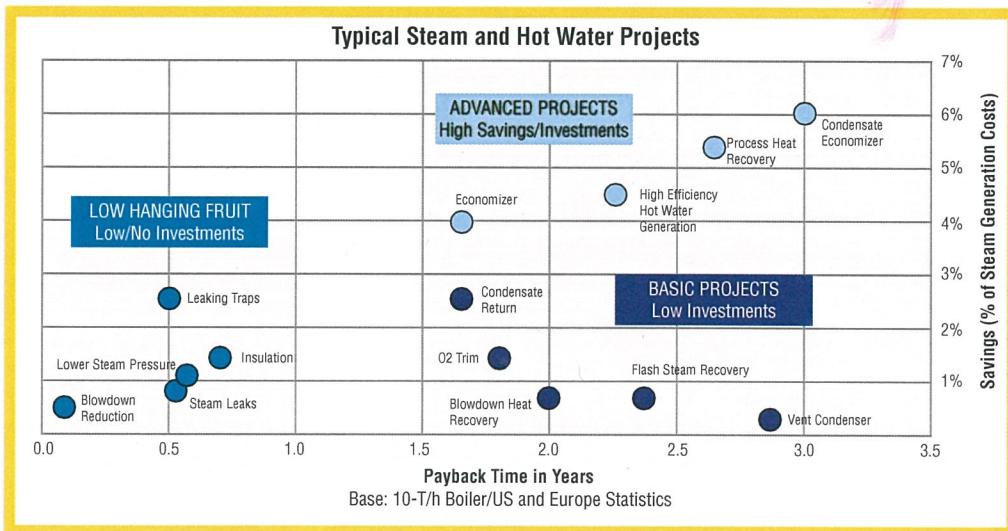
Energy Audits and System Optimization Services

Our Company

Armstrong International is the world's market leader with regards to energy audits and optimization opportunities within steam, air and hot water systems. Our EMEA organization can offer energy efficiency services in multiple languages and within all types of industries.

Engineers from the **Service Department** utilize our experience, which has been accumulated over more than 100 years within the energy sector. This knowledge base coupled to our hands on approach, **practical on site knowledge** and to our performance guarantee enables Armstrong International to offer a **unique solution** to a wide variety of market sectors.

5 - 10% *typical savings on yearly steam cost*



Your Needs

Being involved in the **utilities** and **energy management** of your company, you are likely facing one or several of the following challenges:

- **saving energy** without effecting the operation or production commitments of your site;
- studying the opportunities to **decrease CO₂ emissions** and other greenhouse gases;
- **linking** your consumption of **energy to the manufacturing costs** of your products;
- **eliminating water hammer** issues, thermal shock, temperature control problems and **any other thermal issues** which are associated to thermal systems;
- handling multi-year **management of your steam trap** population;
- **adapting your utilities systems** to the evolution of your company's needs.

2 years
average payback period for our energy-savings projects

Armstrong International EMEA

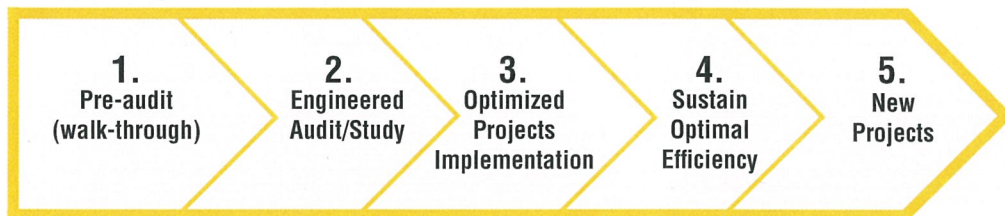
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Our Methodology

In order to meet your needs, our Armstrong engineers utilize the most modern methods to **conduct energy audits and provide recommendations for system optimizations**.



1. Pre-audit: one day on site to identify potential optimizations and total percentage of energy savings based on the yearly steam budget of the site.

2. Engineered audit/study: detailed data collection to confirm feasibility of each optimization project, define the conceptual solution and calculate its payback.

3. Optimized projects implementation: detailed engineering, implementation assistance or turnkey installations with performance guarantee (based on measured results).

4. Sustain optimal efficiency in time: follow-up of steam system efficiency through a dedicated KPI system dashboard. Complete Operation & Maintenance of thermal utilities.

5. New projects: design and/or verification of the steam system for new projects.

Companies that have benefited from our energy audits and system optimization services



Food Industry

AB InBev, Candia, Cargill, Coca-Cola, Ferrero, FrieslandCampina, H. J. Heinz, Lactalis, McCain Foods, Nestlé, PepsiCo, Unilever, etc.



Chemical, Petrochemical & Refining Industries

3M, Arkema, BASF, BP, CEPESA, Eni, Lukoil, Prayon, Repsol, Shell, SIBUR, Solvay, Total, etc.



Pharmaceutical Industry

AkzoNobel, Baxter, Ely Lilly, GlaxoSmithKline, Pfizer, UCB, etc.



General Industry

Burgo Group, Kimberly-Clark, Michelin, DS Smith, etc.

200

energy audits performed by Armstrong EMEA since 2000

Armstrong provides intelligent system solutions that improve utility performance, lower energy consumption, and reduce environmental emissions while providing an “enjoyable experience.”



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