



# SAMYOUNG ENGINEERING

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# New Multi Digital Book

This book contains videos, links and CG.

Please refer to the following to check the optimized NewMulbook.

Download ADOBE READER to use more optimized NewMulbook.

Click on logo to go directly to the download site.

**Click on logo to go directly to the download site.**

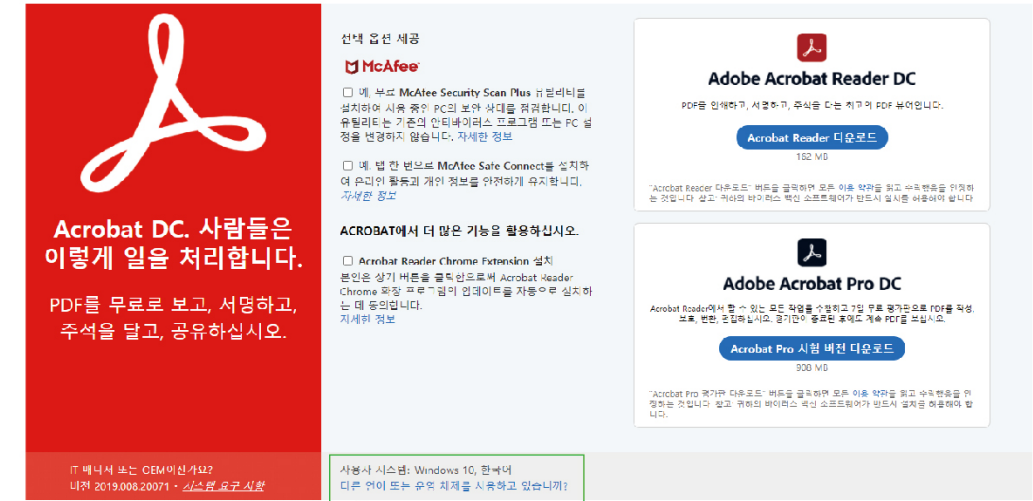


<https://get.adobe.com/kr/reader/otherversions/>



## 01

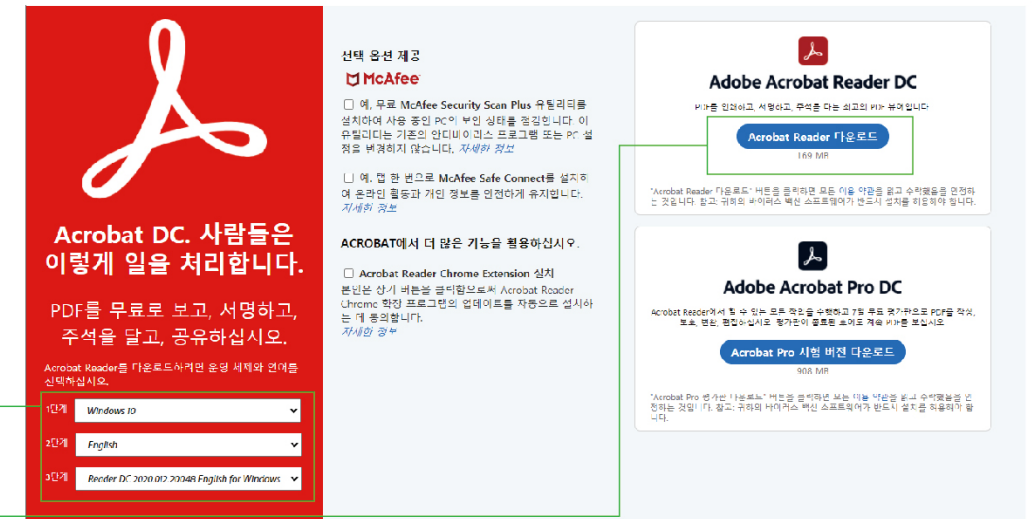
Are you using a different language or operating system? **Selection**



## 02

- Step 1** Select an operating system
  - Step 2** Select **English**
  - Step 3** Select **2020 version**
- ※ 국문 사용 시 프로그램 다운로드/설치 후 프로그램 상단 도움말 - 업데이트확인 클릭 **최신버전(2020년)으로 업데이트**를 반드시 하여야합니다. (3회 이상)

Download and install program



**When the Video(PV) is black,**

Download Reader DC 2020.012.20048 or help - check for updates and update to the latest version!



**When the Video(PV) sounds, but the screen only shows green wavelengths,**

If the system environment is Windows 10, open the reader DC program, press Ctrl+K (default setting), then unlock the security (Advanced) - Sandbox Protection - Enable Protected Mode (M) at startup, close and reopen the program, and the video(PV) will function normally.



# SAMYOUNG

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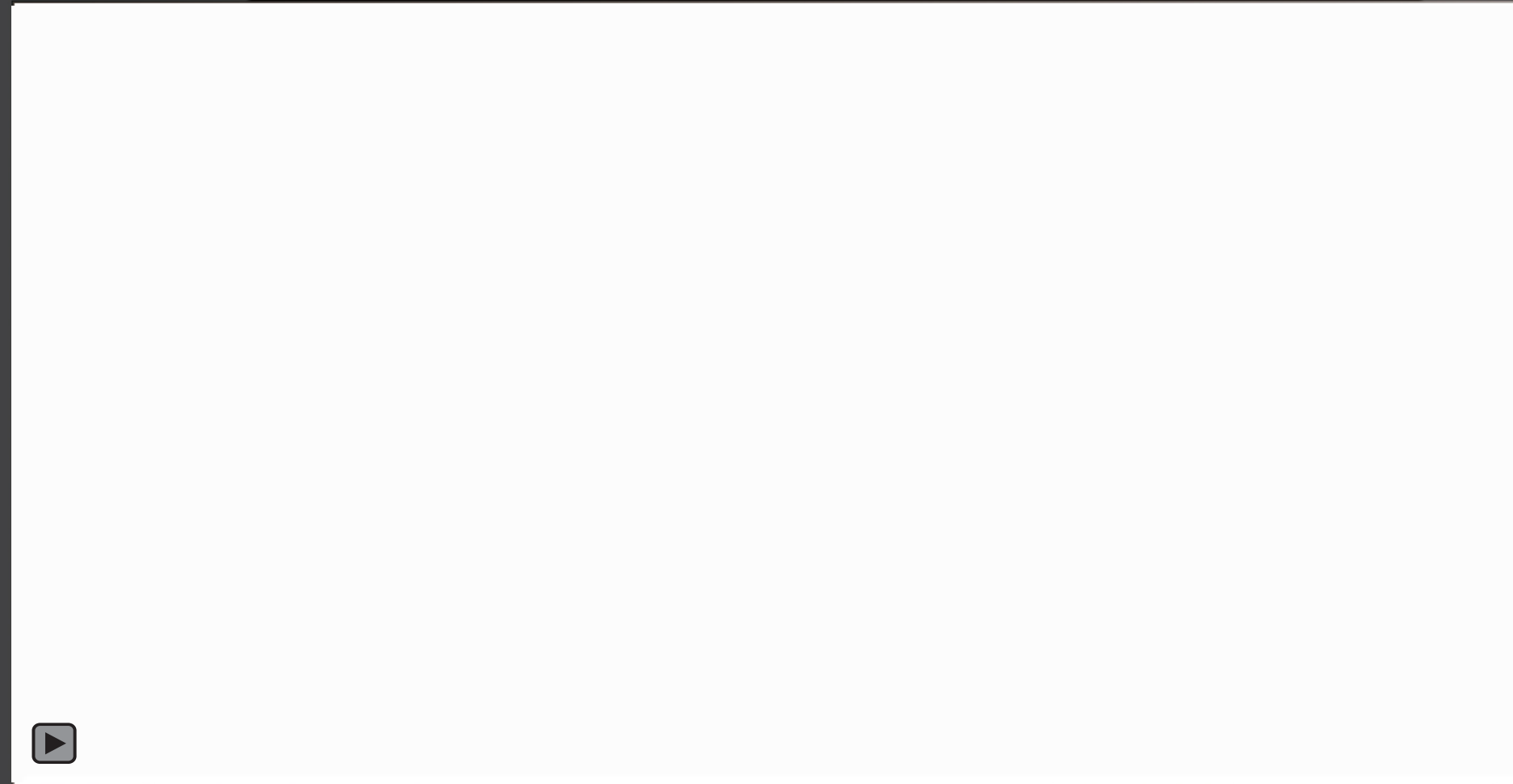
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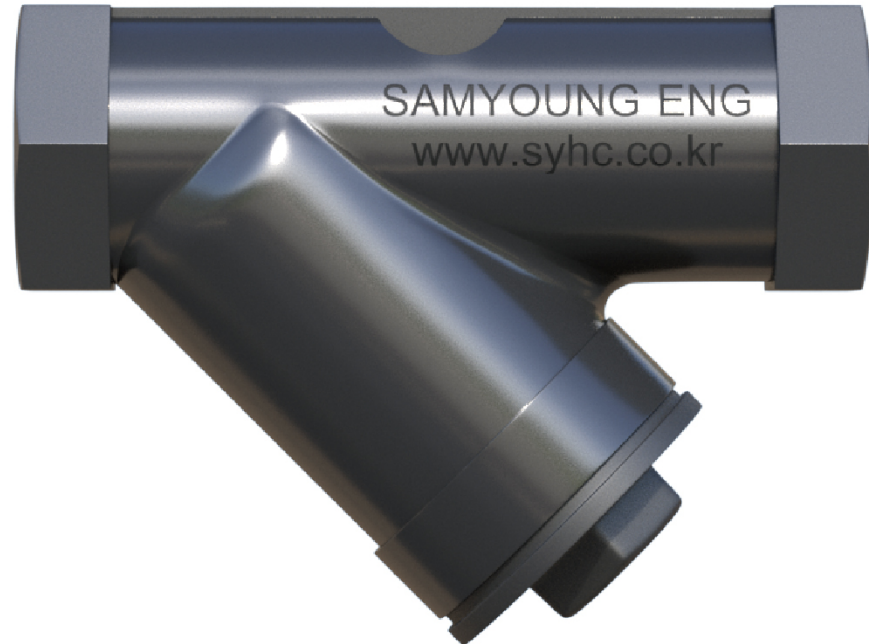
# Promotional Video

Check out the future vision and the best products created by **SAMYOUNG**



  
**VISION**  
Future of the Engineering

# SYO 스팀트랩 이점



## 유지, 보수적(Maintenance) 측면

- 무고장 - 가동부가 존재하지 않음, 부서지거나 마모, 고장이 없음
- 쉬운 보수 유지
- Erosion이 없음 - 내마모성 / 내부식성 열처리
- 반영구적 사용가능

## 에너지 & 비용 절감효과

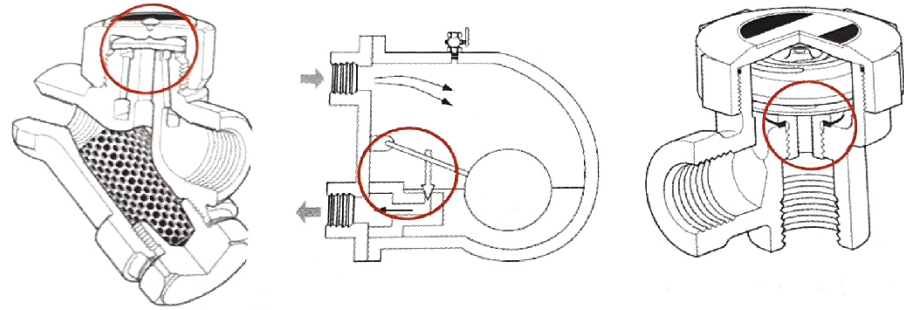
- 영구적인 에너지절감 - SYO트랩을 통해 10%~3%의 스팀 절약
- 짧은 투자금 환수 기간 - 1~2년의 짧은 기간의 투자금 환수
- 감소된 보일러 연료비

## 설치상의 이점

- 컴팩트 사이즈
- 트레인레스 재질
- 다양한 Fitting유형

# 기계식 트랩의 문제점(타회사)

작동부(Moving Part)가 존재



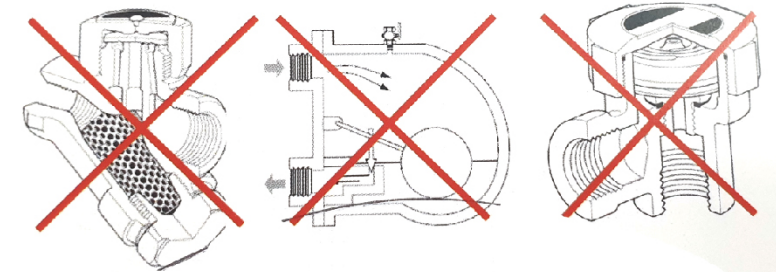
- 평균 10%의 고장률 - 고압, 고압 프로세스에서 고장률이 더 높음
- 예측할 수 없는 수명 - 지속적인 조사 없이는 고장발견 불가능
- 골치 아픈 유지 문제 - 지속적인 트랩 교체, 서비스 키트 설치
- 스팀트랩 관리의 어려움
  - 프로세스에 문제가 생길 때까지 방치
  - 다량의 스팀 손실 발생

# SYO Service

- 5년 Performance보장
- 정확한 사이징 보장
- 각각의 SYO트랩 - 특정 목적 겨냥 제작
- 철저한 기록을 통한 정확한 추적성
- 개별 트랩 관리
- 신속한 대응 대처

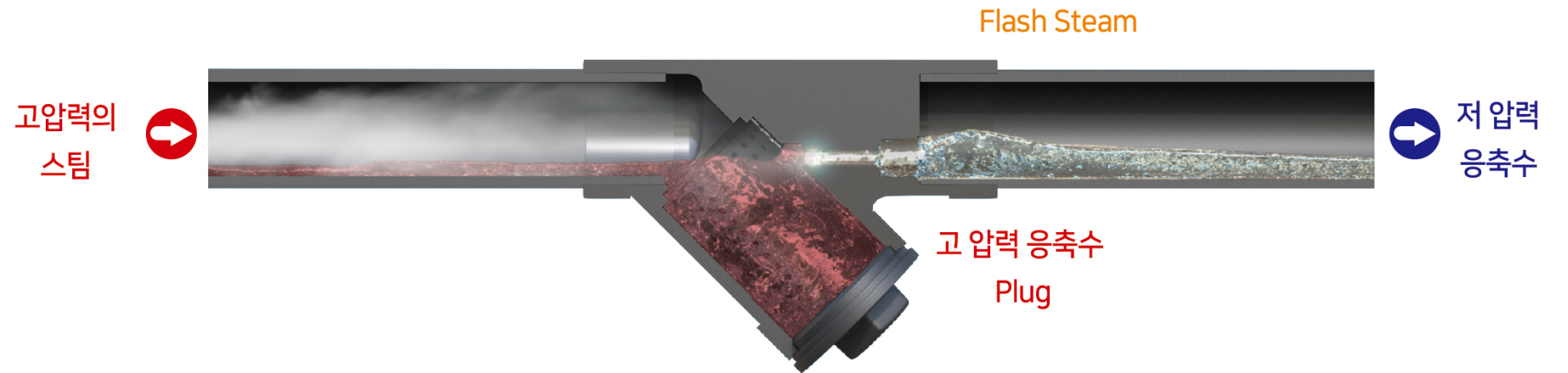
# SYO 스팀트랩의 기능적 특성

작동부(Moving Part)가 존재하지 않음



# SYO 스팀트랩 작동원리

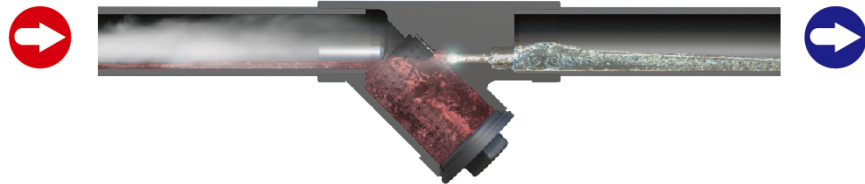
- 오리피스 전단에 **고압력**, 후단에 **저압력** 유지 (작동 최저 차압 0.5)
- **뜨거운 응축수**가 트랩 전단에 **고압력** 구역에서 Orifice를 통과해 **저압력**의 트랩 Veturi Throat로 이동
- Throat에는 더 큰 공간이 있고 **저압력** 임으로 **뜨거운 응축수**가 순간 기화 → **Flash Steam**



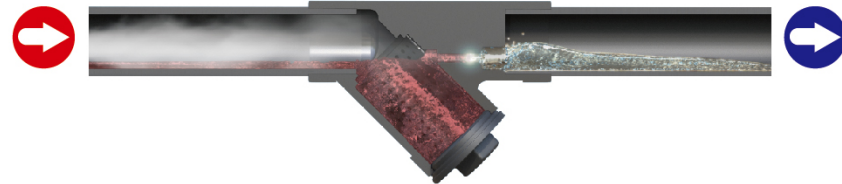
# SYO스팀트랩 가변하중

- 다양한 하중에서도 작동 (4계절의 온도 변화에 효과적으로 대응)
- Ventury구조 - Flash Steam의 팽창을 막고, Throat로 응축수의 배출 촉진
- 국부적인 배압 형성- 생 스팀 손실차단, 응축수 마개 유지, 응축수 유속 조절

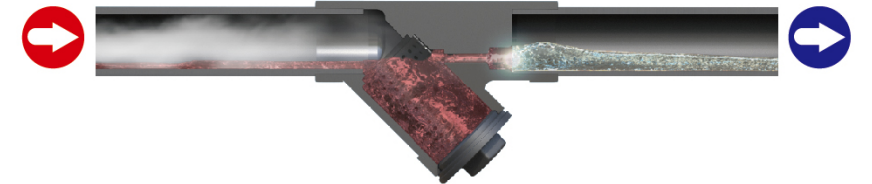
더운날 최소 하중



보통 온도의 중간 하중



추운날 최대 하중

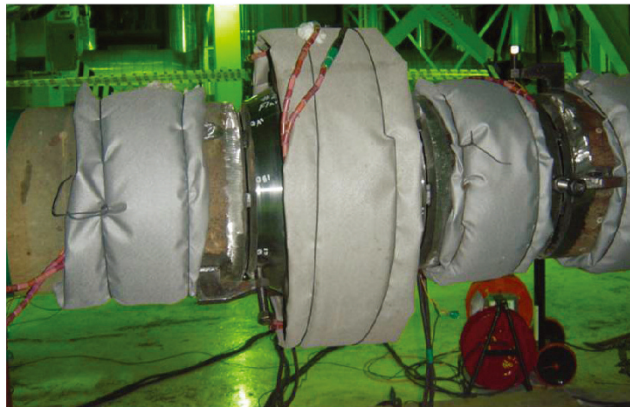




# Heat Treatment

## Local Preheating & P.W.H.T

- Preheating & Post Heating the local part using the heating pad /  
Temperature : Max 900°C



## Gas Firing (Ball Tank / Vessel)

- Heat Treatment using the indirect heat by Gas Burner /  
Temperature : Max 700°C



# Heat Treatment

## Heat Treatment in Box Furnace

- Heat Treatment using the Gas & Electrical Furnace /  
Temperature : Max 1100°C



## Heat Treatment in S.M.A.F (Site Mobile Assembled Furnace)

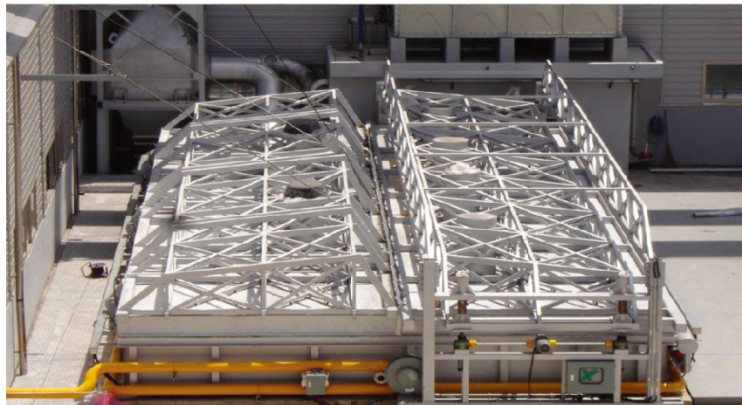
- It makes possible to heat treatment using the temporary furnace at the job site. /  
Temperature : Max 900°C



# Design, Fabrication & Operating Support

## Box Furnace / S.M.A.F

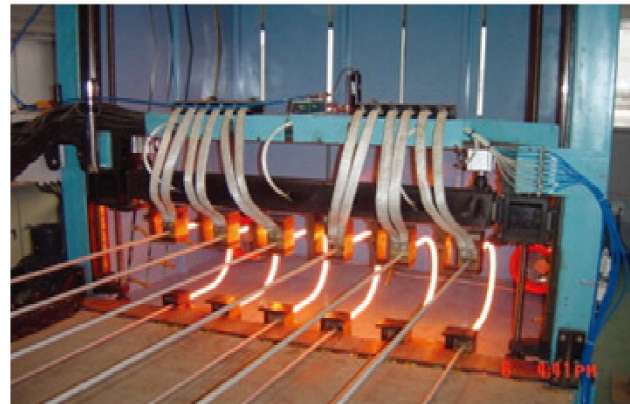
- Provide Furnace & Heat Treatment Technology form the Design Stage to Operation



# Manufacturing

## U tube for Heat Exchanger (Bending, Cutting, Heat Treatment)

- Fabricate not only analog controller but also digital controller



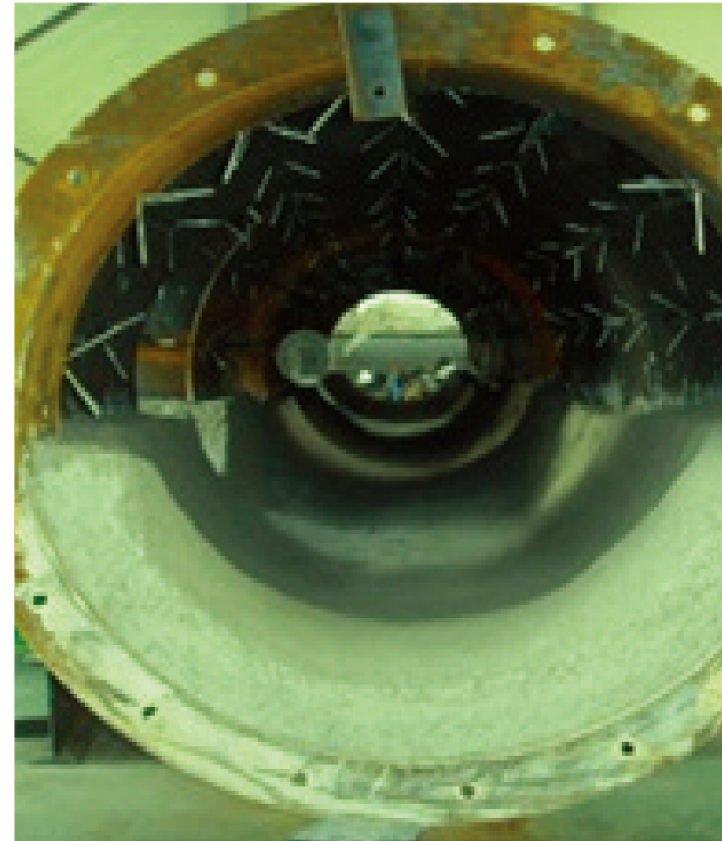
## Heat Treatment Equipment (Regulator & Controller)

- Fabricate not only analog controller but also digital controller



# Energy business

## Refractory Lining & Dry-Out



# Energy Saving (Steam Trap)



**Sapphire Trap**

The original threaded trap



**Quartz Trap**

Simple and effective



**Opal Trap**

Percent Dimensions Performance

## What is steam trap and its important functions

- Discharge condensate as soon as it is formed
- Have a negligible steam consumption
- Have the capability of discharging air and other non-condensable gases.

Supply GEM Trap with unique design of orifice type by TEI.

## Benefits of GEN Trap

- 10 year performance warranty / No More Spare Parts
- Reduced Maintenance Cost / Improved Operating Efficiency
- Typical Payback within 12~18 Months

# History

- 1995. 12 Established SAM YOUNG Heat Treatment Co.,Ltd
- 1998. 09 Certified the Technology of TP316 U-Tube Manufacturing by KIMM
- 1999. 08 Developed a Furnace for Solution Annealing & PWHT
- 2000. 09 Performed CPC Project for Refractory Dry-out Successfully in Taiwan
- 2002. 10 Certified ISO Quality Management System by KGS & SGS
- 2004. 04 Changed the Name of Company with SAM YOUNG Engineering Co.,Ltd
- 2008. 03 Delivered Heat Treatment Furnace for DOOSAN VINA in Vietnam
- 2009. 02 Certified Quality Management System by KEPIC
- 2010. 10 Established Oversea's Corporation in Saudi Arabia
- 2011. 01 Opened Domestic Branch Office in Seoul
- 2011. 12 Secured Land for New Factory in Vietnam
- 2012. 03 Completed #2 Factory at Onsan New Industrial Complex
- 2012. 09 Participated in SAMSUNG QURAYYAH Power IPP Project
- 2012. 11 Certified ISO 14001, OHSAS 18001 by KGS & SGS
- 2012. 12 Signed for Distributor Agreement of GEM Steam Trap with TEI (CANADA)

# Patent & Certificate

## Patent



Heat Treatment in the Box Furnace



The Box Furnace of Underground type



Non-Oxidization Annealing Method

## Certificate



Quality Management System



ISO 9001:2008



Health & Safety Management System



OSHAS18001:2007



Quality System



Environmental Management System



ISO 9001:2008



Overseas Construction



Specialty Contractor



Innovative Technology Ltd.



—○ Future of the Engineering

# Client

## Petrochemicals

SK energy, S-OIL, GS Caltex, Hyundai Oil Bank, HONAM Petrochemical, TONGSUH Petrochemical, Hyosung, ISU, etc.



## EPC Contractors

DAELIM Industry, GS E&C, SK E&C, Hyundai Construction, Samsung C&T, etc.



## Equipment Fabricators

WOOYANG H.C, DKME, DKT, TSM-TECH, ILJIN, S-TANK, JMC, SUNGJIN, etc.

