FIRETS 法瑞测试设备

FRTS

FRTS-5660

Cone Calorimeter

Cone Calorimeter

OXYGEN CONSUMPTION / MATERIAL RESEARCH

Resolve ignition, heat release and mass loss over time.

Study small-scale material behaviour under controlled radiant exposure. Cone calorimetry links ignition, heat release, smoke and mass change, helping development teams compare coatings, thicknesses and formulations under a defined thermal condition.

Principle

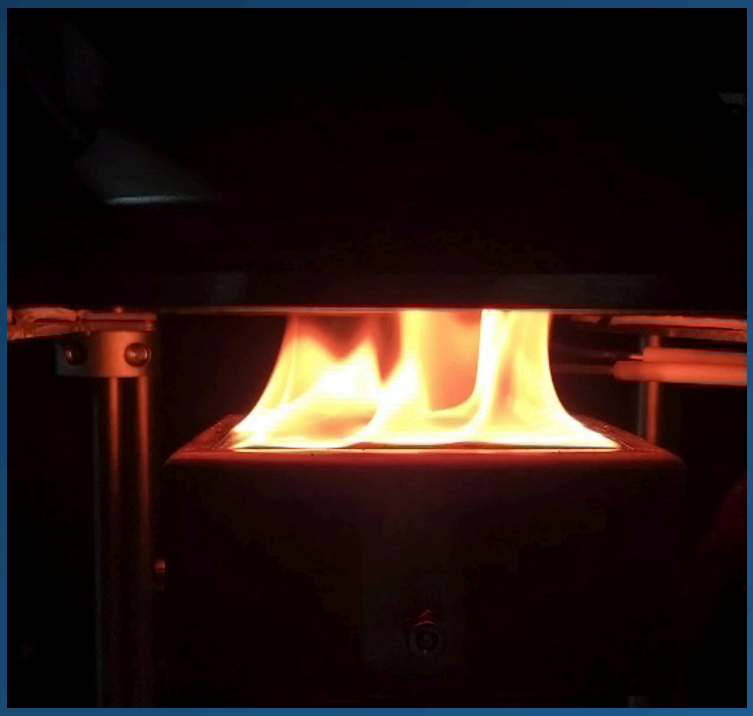
A conical heater exposes the specimen to a selected heat flux.

System

Radiant heater, specimen holder, load measurement, collection hood, exhaust measurement, gas analysis and acquisition software.

Application

Building materials, rail-interior materials and polymer research.



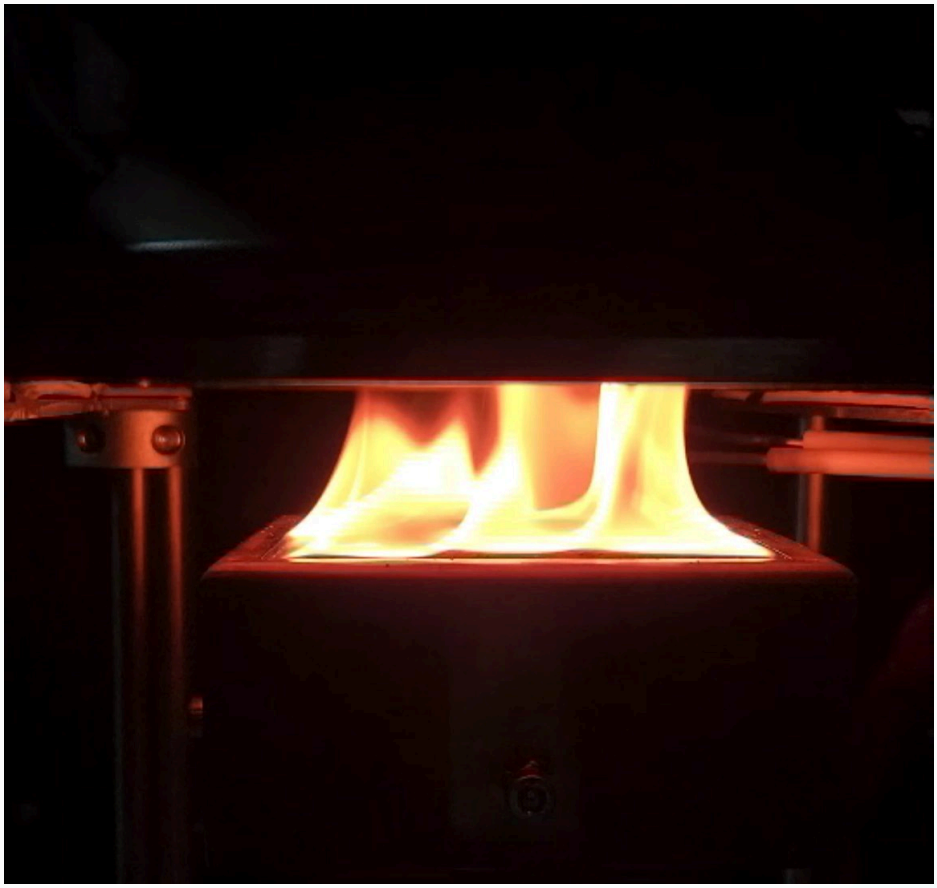
Original equipment photograph. Appearance only.

Sichuan Farui Testing Equipment Co., Ltd.

01 / PRODUCT / APPLICATION

Product purpose and selection

Study small-scale material behaviour under controlled radiant exposure. Cone calorimetry links ignition, heat release, smoke and mass change, helping development teams compare coatings, thicknesses and formulations under a defined thermal condition.



Original equipment photograph. Appearance only.

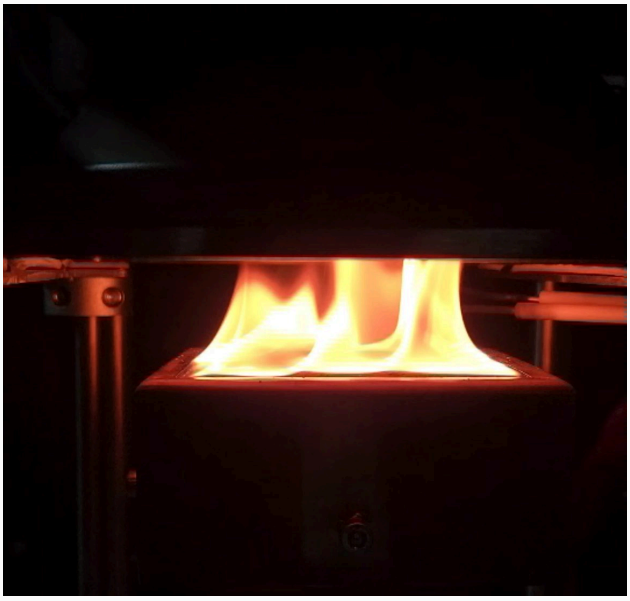
OXYGEN CONSUMPTION

Measurement principle

A conical heater exposes the specimen to a selected heat flux.

Measurement principle

A conical heater exposes the specimen to a selected heat flux. Combustion products enter an exhaust measurement section; oxygen concentration and exhaust flow support calorimetry, alongside weighing and optical smoke measurements.



Original equipment photograph. Appearance only.

Use in the laboratory

Radiant heater, specimen holder, load measurement, collection hood, exhaust measurement, gas analysis and acquisition software.

English edition follows the reviewed Chinese manuscript evidence. Configuration and laboratory conditions follow the technical file confirmed by both parties. Unconfirmed numerical claims from the Chinese edition are not restated here.

SPECIMEN & EXPOSURE

Specimens and construction

Building materials, rail-interior materials and polymer research.

01 Specimens and construction

Building materials, rail-interior materials and polymer research. Optional gas analysis is selected for the study rather than assumed in the base equipment.

02 Use in the laboratory

Record heat flux, ignition mode, exposed area and edge wrapping. Check oxygen, flow and mass calibration, and use a common time reference for HRR, THR, ignition and mass change.

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CALIBRATION & QUALITY

Calibration and verification

Radiant heater, specimen holder, load measurement, collection hood, exhaust measurement, gas analysis and acquisition software.

01 Calibration and verification

Radiant heater, specimen holder, load measurement, collection hood, exhaust measurement, gas analysis and acquisition software.

02 Use in the laboratory

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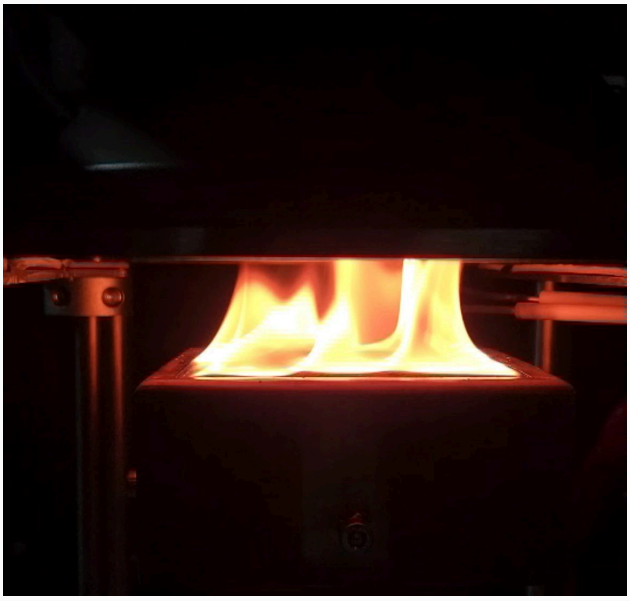
TEST WORKFLOW

Test sequence

A conical heater exposes the specimen to a selected heat flux.

Test sequence

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MEASUREMENTS & CALCULATIONS

Calculation and reported quantities

ISO 5660-1 and ASTM E1354 address calorimetry under controlled radiant exposure.

01 Calculation and reported quantities

ISO 5660-1 and ASTM E1354 address calorimetry under controlled radiant exposure. Heat flux, orientation, backing and edge restraint affect results. Sector-specific requirements still determine specimen preparation and acceptance criteria.

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HARDWARE & CONFIGURATION

Hardware arrangement

Radiant heater, specimen holder, load measurement, collection hood, exhaust measurement, gas analysis and acquisition software.

01 Hardware arrangement

Radiant heater, specimen holder, load measurement, collection hood, exhaust measurement, gas analysis and acquisition software.

02 Use in the laboratory

Building materials, rail-interior materials and polymer research. Optional gas analysis is selected for the study rather than assumed in the base equipment.

English edition follows the reviewed Chinese manuscript evidence. Configuration and laboratory conditions follow the technical file confirmed by both parties. Unconfirmed numerical claims from the Chinese edition are not restated here.

DATA & SOFTWARE

Control software and records

Record heat flux, ignition mode, exposed area and edge wrapping.

What the screenshots show

These screenshots are original captures from the reviewed Chinese edition. They illustrate operating, recording or reporting functions available in that software. Displayed readings remain examples from the captured session.

How to read them

Record heat flux, ignition mode, exposed area and edge wrapping. Check oxygen, flow and mass calibration, and use a common time reference for HRR, THR, ignition and mass change.

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APPLICATION & INTERPRETATION

Intended application

Building materials, rail-interior materials and polymer research.

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Building materials, rail-interior materials and polymer research. Optional gas analysis is selected for the study rather than assumed in the base equipment.

Use in the laboratory

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10 / COMPANY

High-tech enterprise

Sichuan Farui Testing Equipment Co., Ltd. holds a High-tech Enterprise certificate. Its work covers fire-protection and material fire-test equipment, measurement and control software, and laboratory system integration.



Original High-tech Enterprise certificate. Dates and identifiers follow the certificate as issued.

Certificate number

GR202551000122

Issue date

2025.12.02

Stated validity

Three years

Issue date and validity are shown as stated on the certificate.

11 / COMPANY

Quality management system

From technical requirements through on-site use, Farui organises instrument development, assembly and service within the certified management-system scope, connecting requirement confirmation, technical implementation and project delivery.


注册号：30924Q0210R0S

质量管理体系认证证书

兹证明

四川法瑞检测设备有限公司

统一社会信用代码：91510703MA6Z473E4K

注册地址：绵阳市涪城区剑安路 35 号（科技城软件产业园）

审核地址：四川省绵阳市游仙区科学城中经路 52 号辅助房 12、13 号

质量管理体系 符合

GB/T19001-2016 idt ISO9001:2015 标准要求

该管理体系认证所覆盖的范围为：

工业自动控制系统仪器装置的研发、组装及服务

该组织分场所信息：

"无"

获证组织在证书有效期内每年至少接受一次本认证机构的监督审核，并将监督审核合格标志粘贴于证书指定位置，此证书方可持续有效。本证书有效性请登录 http://cx.cnca.cn 查询

颁证日期：2024 年 06 月 06 日　　有效期至：2027 年 06 月 05 日

国评认证（成都）有限公司

签发人：

地址：成都高新区[illegible]7 层 8 号

Original quality-management-system certificate. This is a company-system certificate, not product certification.

Certified standard

GB/T 19001-2016 / ISO 9001:2015

Certified scope

Research, assembly and service of industrial automatic-control system instruments

Registration number

30924Q0210R0S

Stated validity on the certificate

2024.06.06 — 2027.06.05

This page records the company management-system certificate. Coverage and current standing remain those registered by the certification body.

12 / COMPANY

Industry participation

As a senior member of the Smart Laboratory Professional Committee of the China Association for Standardization, Farui follows test standards and smart-laboratory practice, connecting industry exchange with instrument design, measurement and technical service.


会 员 证 书

兹批准 四川法瑞检测设备有限公司

为中国标准化协会智慧实验室专业委员会高级会员单位。

特发此证

发证日期： 2026 年 07 月 21 日

有效日期： 2027 年 07 月 20 日

编 号： CAS-D-260721-3182

发证机构： 中国标准化协会

Original senior-membership certificate of the Smart Laboratory Professional Committee.

Membership and organisation

Senior member, Smart Laboratory Professional Committee, China Association for Standardization

Issue date

2026.07.21

Stated validity on the certificate

2027.07.20

Membership is shown as registered on the original certificate and its stated validity date.

13 / COMPANY

Research and standards participation

Around flame retardancy, fire protection and measurement systems, Farui continues to accumulate instrument-design, automatic-control and test-method experience, using research and standards participation in technical discussion and system design for complex tests.

8 Invention patents (count)

4 Utility models (count)

4 GB/T participation (count)

From method to apparatus

Test conditions, measured quantities and use cases are translated into configuration options, with the test method as the starting point for technical discussion.

From signal to record

Data acquisition, control software and combined systems are organised so that original signals, operating conditions and reported results remain corresponding.

Figures follow the April 2026 company introduction. Patent applications are not distinguished from granted patents. Participation lists follow the corresponding documents.

CONTACT / FIRETS

Contact Farui

Discuss selection against the intended method, material and specimen form, measurement and reporting needs. Supply configuration and laboratory conditions follow the technical documents confirmed by both parties.

From the test need to the equipment configuration

Product selection / technical exchange

Project configuration / service enquiry

Connect on WeChat

Sichuan Farui Testing Equipment Co., Ltd.

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www.firets.com