



MALAYSIAN STANDARD

MS 1489-2:2023

**Fire extinguishing installations and
equipment - Part 2: Wet and dry firefighting
mains (First revision)**

ICS: 23.040.01

Descriptors: non-automatic firefighting, wet and dry firefighting, design, installation

© Copyright 2023

DEPARTMENT OF STANDARDS MALAYSIA

DEVELOPMENT OF MALAYSIAN STANDARDS

The **Department of Standards Malaysia** is the national standards and accreditation body of Malaysia.

The main function of Department of Standards Malaysia is to foster and promote standards, standardisation and accreditation as a means of advancing the national economy, promoting industrial efficiency and development, benefitting the health and safety of the public, protecting the consumers, facilitating domestic and international trade and furthering international cooperation in relation to standards and standardisation. The use of Malaysian Standards is voluntary except in so far as they are made mandatory by regulatory authorities by means of regulations, local by-laws or any other similar ways.

Malaysian Standards are developed through consensus by committees which comprise balanced representation of producers, users, consumers and others with relevant interests, as may be appropriate to the subject at hand. The development of a standard as a Malaysian Standard is governed by the Standards of Malaysia Act 1996 [Act 549]. Section 18A of the act stipulated that, all Malaysian Standards are owned by the Government of Malaysia and no part of a Malaysian Standard can be reproduced in any form without the written permission of the Director General.

For further information on Malaysian Standards, please contact:

Department of Standards Malaysia

Level 4 – 7, Tower 2, Menara Cyber Axis
Jalan Impact, Cyber 6
63000 Cyberjaya
Selangor Darul Ehsan
MALAYSIA

Tel: 60 3 8008 2900
Fax: 60 3 8008 2901
<http://www.jsm.gov.my>
E-mail: central@jsm.gov.my

Contents

	Page
Committee representation.....	ii
Foreword.....	iii
1 Scope.....	1
2 Normative references	1
3 Terms and definitions	2
4 Fire mains	4
4.1 Design considerations	4
4.2 Provision and siting	7
4.3 Electrical installation	7
5 Private fire hydrants	8
5.1 Design considerations	8
5.2 Provision and siting	8
6 Water supplies and pumping arrangements	8
6.1 Adequacy of basic supply	9
6.2 Supplementing the basic supply for wet fire mains	9
6.3 Pumps for wet fire mains	9
6.4 Additional precautions for wet fire mains/hydrant mains	12
6.5 Emergency arrangements for filling suction tanks	12
6.6 Fire ring main supply	13
7 Installation, commissioning and maintenance	13
7.1 Work on site	13
7.2 Protection of buildings under construction	13
7.3 Initial inspections and acceptance tests	14
7.4 Maintenance of systems and rectification of defects	16
8 Signage	17
8.1 Identification of equipment	17
8.2 System information	18
Annex A Protecting installed equipment from theft and vandalism	19

MS 1489-2:2023

Committee representation

The National Standards Committee on Fire Safety (NSC 13) under whose authority this Malaysia Standard was developed, comprises representatives from the following organizations:

Association of Consulting Engineers Malaysia
Construction Industry Development Board Malaysia
Department of Chemistry Malaysia
Department of Occupational Safety and Health
Department of Standards Malaysia (Secretariat)
Fire and Rescue Department of Malaysia
Forest Research Institute Malaysia
General Insurance Association of Malaysia
Malaysian Fire Protection Association
Malaysian Institute of Architects
Malaysian Public Works Department (Mechanical Branch)
Master Builders Association Malaysia
Real Estate and Housing Developers' Association Malaysia
SIRIM QAS International Sdn Bhd (Product Certification and Inspection Department)
SIRIM QAS International Sdn Bhd (Testing Services Department)
Tenaga Nasional Berhad
The Institution of Engineers, Malaysia
The Institution of Fire Engineers (UK) Malaysia Branch
Universiti Kebangsaan Malaysia
Universiti Malaya
Universiti Putra Malaysia

The Technical Committee on Wet Fire Protection System (NSC 13/ TC 3) which developed this Malaysian Standard consists of representatives from the following organisations:

Association of Consulting Engineers Malaysia
Department of Standards Malaysia (Secretariat)
Federation of Malaysian Manufacturers
Fire and Rescue Department of Malaysia
Malaysian Fire Protection Association
Malaysian Institute of Architects
Malaysian Public Works Department (Mechanical Branch)
SIRIM QAS International Sdn Bhd (Product Certification and Inspection Department)
SIRIM QAS International Sdn Bhd (Testing Services Department)
The Institution of Engineers, Malaysia
The Institution of Fire Engineers (UK) Malaysia Branch
Universiti Putra Malaysia

Foreword

This Malaysian Standard was developed by the Technical Committee on Wet Fire Protection System (NSC 13/TC 3) under the authority of the National Standards Committee on Fire Safety (NSC 13).

This Malaysian Standard is a first revision of MS 1489-2:2012, *Fire extinguishing installations and equipment - Part 2: Wet and dry firefighting mains*.

MS 1489 consists of the following parts, under the general title *Fire extinguishing installations and equipment*:

Part 1: Hose reels and foam inlets

Part 2: Wet and dry firefighting mains

This Malaysian Standard cancels and replaces MS 1489-2:2012.

This is a full revision of the standard. The principle changes are to update the recommendations for:

- flow tests and pressures;
- riser and dropper mains;
- pumps;
- maintenance;
- shut-off pressures.

It is important for the fire protection system of a building to be considered as a whole. The provision of fire mains is an essential element of the fire protection systems in large and complex buildings due to the difficulties in providing water supplies at the point of use for fire-fighting and search and rescue. It is essential that these systems be carefully maintained to ensure instant readiness when required.

Compliance with a Malaysian Standard does not of itself confer immunity from legal obligations.