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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

MH/T 1064.5-2017

**Safety code of power working with the helicopter. Part 5-Hot
washing operation
(English Translation)**

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Foreword

MH/T 1064 "Safety Regulations for Helicopter Electric Operation" is divided into the following seven parts.

- Part 1: General requirements;
- Part 2: Inspection operation;
- Part 3: Laser scanning operation;
- Part 4: Live work;
- Part 5: Electric water washing operation;

--Part 6: Hoisting and assembly tower operations;

--Part 7: Unfold the guide rope operation.

This part is part 5 of MH/T 1064.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part was proposed by the Transportation Department of the Civil Aviation Administration of China.

This part was approved by the Aircraft Airworthiness Certification Department of the Civil Aviation Administration of China.

This part is under the jurisdiction of the China Academy of Civil Aviation Science and Technology.

Drafting organizations of this section. The Second Research Institute of Civil Aviation Administration of China, State Grid General Aviation Co., Ltd.

1 Scope

This part of MH/T 1064 specifies the use of manned helicopters (hereinafter referred to as helicopters) to carry out electrical equipment on overhead transmission lines.

General requirements for charged water flushing operations, restrictions on charged water flushing operations, operational safety requirements for different flushing objects, and before and after operations Work requirements.

This part is applicable to the overhead transmission of 10 kV~500 kV AC and ± 500 kV DC using manned helicopters equipped with special equipment Electric water washing operations performed by line power equipment.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 5582 External insulation pollution level of high voltage power equipment GB/T 13395 Guidelines for flushing of electric equipment with live water GB 26859 Electric Safety Work Regulations Power Line Part GB 26860 Electrical Safety Work Rules for Electrical Parts of Power Plants and Substations

3 Terms and definitions

The following terms and definitions apply to this document.

Helicopter hot washing Use helicopter-mounted special equipment to carry out live water washing operations on power transmission line power facilities.

Water resistivity

The volume resistance of water at 20°C in a unit cube.

Length of water stream the length of the water column from the nozzle of the water gun to the drop point of the water column on the charged equipment.

Washing vertical angle the angle between the water column and the ground.

Washing horizontal angle the horizontal acute angle between the line between the flushed insulator and the adjacent insulator and the water column.

Device for water treatment A complete set of equipment for purifying low-resistivity raw water into high-resistivity water for flushing charged water for power transmission equipment.

Device for hot washing the water pump is used to spray the high-resistivity water from the water storage container through the water pipe and the water gun to the transmission line facilities, and the electric porcelain or glass is insulated.

Flushing device.

Water gun

When washing with water, the tools for spraying water consist of nozzles, joints, valves, hard pipes, handles or fixed supports.

Note: Water guns can be divided into handheld water guns, fixed water guns, and robotic water guns.

Nozzles

Parts of the water gun.

4.1 Personnel

4.1.1

The captain of the helicopter carrying out the electric water flushing operation shall meet the following requirements.

- Have experience in helicopter external load operations;
- Not less than 2 000 h for helicopters;
- Long time of operation model not less than 100 h;
- At least 100 hours of low-altitude flight experience, including electric power operation flight experience;

--Not less than 30 h of flight training time for flushing with electrified water.

4.1.2

The on-board personnel performing the helicopter live water flushing operation shall meet the following requirements.

-Good health, no physical and psychological obstacles that hinder the operation of charged water washing;

--Have basic knowledge of power transmission lines, master the basic principles and operating methods of live work;

--Familiar with the scope of application and usage of flushing equipment;

--Master the emergency rescue method, electrolysis rescue method and artificial respiration method;

-Pass the theoretical training and operation assessment of the electric power management department, and hold a live working certificate;

--Verification of live-water flushing method and operation assessment of flushing personnel. Refer to Appendix A for the assessment method.

4.1.3

The person in charge of work (or safety guardian) shall meet the following requirements.

--Have more than 3 years of actual working experience in live work on transmission lines, be familiar with equipment conditions, have certain organizational capabilities and accident handling Management ability-Pass the relevant theoretical training and operation assessment.

4.2.1 Helicopter

4.2.1.1

The water gun should be installed on the front driver side of the rear of the helicopter, and tools and equipment such as water pumps and motors should be installed on the first passenger side of the helicopter.

Side to balance the helicopter's load.

4.2.1.2

An anti-falling device for personnel and tools should be installed in the engine room to waterproof and wash the operators and tools that fall due to the swing of the helicopter. drop.