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JAPANESE INDUSTRIAL STANDARD

General Rules for Testing of Printing Machines

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In the event of any doubt arising,
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General Rules for Testing of Printing Machines

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1. Scope

This Japanese Industrial Standard specifies the common items in the case of conducting the tests of operating performance, static accuracy and printing evaluation of printing machines and each testing method.

Remark: In the test of each type printing machine, items are selected concretely corresponding to the purpose and performance of the printing machine out of each item specified in this Standard, and the representative application examples are shown in Tables 1 to 11 for informative reference.

2. Common Items

2.1 The test shall, as a rule, be carried out in the factory where the printing machine is manufactured.

2.2 The test shall be carried out after setting and regulating so that the performance and accuracy required for operation of printing machine are not interfered.

2.3 The test shall, as a rule, be carried out without disassembling the printing machine.

2.4 The test shall be carried out under the state where the electric motor, electric equipment and other devices to be mounted on the machine are equipped and lubricating oil, working oil agent, etc. are filled adequately.

2.5 The test shall, as a rule, be carried out after the state of temperature, lubricating, etc. are stabilized approximately by operating the printing machine over each part.

2.6 Static accuracy shall, as a rule, be measured under the state where no load is applied to the printing machine.

Applicable Standards and Reference Standards: See page 24.

2.7 In the case where not less than two methods are specified for the same test item, it shall be tested according to either one method of them.

2.8 The measuring instrument to be used for test and its accuracy are specified in Appendix. However, in case where it is impossible to use the measuring instrument specified in Appendix, the test may be carried out by using the device affirmed to be equivalent thereto in accuracy.

2.9 In case where abnormalities are affirmed during test, the causes shall be examined and after adjusting them, the test, carried out, as a rule, again from the first procedure. However, as to the item which does not cause influence on the test results already carried out with the adjustment, the test may not be repeated.

3. Operating Test Methods

3.1 Purpose and Items of Operating Test The purpose of operating test is to test the performance required for operation of printing machine, and the items shall be of three items of function test, no load operating test and loading operation test.

3.2 Function Test Method As to the function test, each part shall be operated and the smooth of the working and security of function, tested. The marking method of test results, test items and methods shall be as follows:

- (1) Marking Method The compliance of function shall be expressed.
- (2) Test Items and Methods The test items and the methods shall be in accordance with Table 1.

Table 1. Test Items and Methods for Function Test

Test item		No.	Method	Representative application example (informative reference)
Operation	Starting, stopping and working operation	1-11	Actuate repeatedly starting, stopping (braking, reversing, inching, etc. are included) at a suitable speed and affirm the smoothness and security of actuation.	Printing shell of printing machine Spider arm of feeding part
	Converting operation of speed	1-12	Convert the speed and affirm the smoothness of actuation and security of indication of operating device.	Printing shell speed of printing machine Folding shell speed of rotary press printing machine
	Stopping operation at abnormal time	1-13	Actuate repeatedly and affirm the smoothness and security of actuation.	Emergency stop button
Paper passing and other feeding motion	Starting, stopping and working operation	1-21	Actuate repeatedly starting, stopping (braking, reversing, inching, etc. are included) at a suitable speed, and affirm the smoothness and security of actuation.	Paper feeding device of sheet printing machine Paper passing device of rotary press printing machine
	Converting operation of paper feeding speed	1-22	Convert the feeding speed and affirm the smoothness of actuation and security of indication.	Feeding speed of paper feeding device of sheet printing machine

Table 1 (Continued)

Test item	No.	Method	Representative application example (informative reference)
Paper passing and other feeding motion	1-23	Convert the feeding amount and affirm smoothness of actuation and security of indication.	Rotary amount of ink fountain roller and damping roller Discharge amount of ink pump
	1-24	Convert the feeding speed and affirm smoothness of actuation and security of indication.	Speed of ink fountain roller and damping roller
	1-25	Affirm smoothness and security of actuation	Automatic stopping device when attained to command setting position Non-regulated paper, two sheet detection
Position regulating motion	1-31	Affirm smoothness and uniformity of actuation of moving by machine power or hand.	Detaching apparatus of rollers Printing press regulating device Roller pressure regulating device

Table 1 (Continued)

Test item	No.	Method	Representative application example (informative reference)
Position regulating motion	1-32	Affirm security of actuation.	Automatic shell entering of printing machine, shell drawing device and moving each device. Automatic paper joining device of rotary press printing machine shell entering, shell drawing out
	1-33	Affirm security of actuation of portion required for printing.	Each part of feeding paper, printing, paper discharge, ink, water
Attaching and detaching	1-41	Affirm security and smoothness of attaching and detaching.	Print shell device of printing machine Print shell exchange device of photogravure rotary press machine
	1-42	Affirm security and smoothness of attaching and detaching	Ink roller Wetting water roller
	1-43	Affirm security and smoothness of attaching and detaching.	—
	1-44	Affirm security and smoothness of attaching and detaching	Consuming parts of folding machine of rotary press printing machine

Table 1 (Continued)

Test item	No.	Method	Representative application example (informative reference)
Auxiliary devices	1-51	Affirm the insulation state before and after working test.	-
	1-52	Affirm safety of working person and security of machine protective function.	Finger guard Paper blocking automatic stopping device, paper cut automatic stopping device Overload release clutch
	1-53	Affirm suitable distribution of oil amount and security of seal.	
	1-54	Affirm security of pressure regulating and seal.	
	1-55	Affirm security of pressure regulating and seal.	Pneumatic pressure type shell entering, shell drawing air cushion device of offset rotary press
	1-56	Affirm security of function of dry-regulation, and the like.	
	1-57	Affirm security of pressure regulation and seal.	Cooling roller after drying Cooling of ink vibration roller

Table 1 (Continued)

Test item	No.	Method	Representative application example (informative reference)
Auxiliary devices	1-58	Affirm security of function.	Wetting water circulation device Ink cleaning device of offset printing machine Print bending machine of offset rotary press
Attached devices	1-59	Affirm security of function.	Disc type electromagnetic brake and clutch of driving part of rotary press printing machine
Others			