

# 1. Outline of “MF Eco machine Certification System”

(1) Name: JFMA MF Eco machine Certification System

(2) Characteristics of the system

Japan Forming Machinery Association (hereinafter called JFMA) representing its industry, established the exclusive “MF Eco machine Certification Criteria” authorized by the certification council, consisting of JFMA members and the outside experts by which suitability evaluation, certification, registration and publishing are performed.

The products that meet the set certification criteria are considered part of eco-friendly products as “MF Eco machine”, which will be promoting both domestically and internationally for development of eco-friendly products that will help reduce burdens on global environment as well as the improvement of work environment.

(3) Certification marks in Japanese and English: (Trademark registered in Japan, EU, Russia, China, Korea, Taiwan, India)

JFMA will provide the mark shown below for the certified products and print the information on related printing materials.



(4) Provider of the certification marks: Japan Forming Machinery Association

## 2. Details of the system

(1) The management association: JFMA

The mission of JFMA is to strengthen the industry with the promotion of various measures for its sound production, distribution, and trade, thus aim at the sound and healthy growth of the industry as well as of the associated industries, eventually to contribute to the prosperity of our national economy.

(2) The implementation of the system: from April, 2009

(3) The scope of the products:

- 1) Press machines:
  - i) Mechanical presses
  - ii) Hydraulic presses
  - iii) Forming machines

- 2) Sheet metal processing machines:

- i) Punching press machines (include punching of laser combined machines)
- ii) Press brakes, iii) Pipe bending machines, iv) Laser cutting machines,

- v) Plasma cutting machines, vi) Shearing machine
  - vii) Spot Welders, viii) Clinching Machines
- 3) Automation and related equipment: i) Coil feeders, ii) Transfer equipment

(4) The effect to the target environment

The following three factors are in focus when the equipment is operational on the life stage.

- 1) Efficient energy consumption (energy saving),
- 2) Efficient use of natural resources(resource saving),
- 3) Environmental protection

(5) Criteria for the use of certification marks:

1) Criteria in brief (Chart 1)

The applied product is evaluated based upon the comparison with the similar product (the product made in 2000 or after, having the similar level of capacity and the similar purpose of usage.)

The evaluation standard is set for the following three requirements to review the environment factors described in the above (4):

a) Essential requirement:

Under the set load operation, 20% or more electric power consumption is reduced

b) Selective requirement:

Minimum 3 evaluation points are met in the following three value items such as energy saving, natural resources saving, and environment protection.

c) Recommended requirement:

Minimum 3 items are equipped for the devices or factors (two items in the case of automation and related equipment) in terms of energy saving, natural resources saving, and environment protection.

The product which meets the above three requirement factors will be certified as the MF Eco machine.

2) Procedures to set the criteria

The Certification Council (chairman: Prof. Yanagimoto, Tokyo University) set the industrial association's exclusive "MF Eco machine Certification Criteria (JFMA Standard)".

3) The guideline of criteria

The criteria have been set for the purpose of enhancement of the forming machinery products in general to become the eco-friendly products. So the review of the criteria as well as standard-met products will be made to meet with the change of need for the global environment.

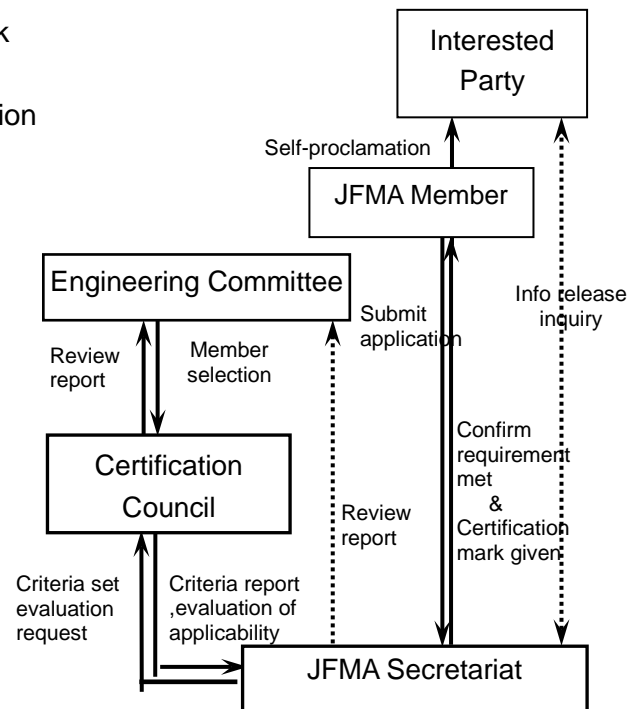
MF Eco machine Certification Criteria in brief (Chart1)

Requirement	Environment factor and Evaluation item		Applicable criteria
a) Essential	Energy saving	20% or more cumulative electric power consumption is reduced under the set operating condition	Measured under the condition set by JFMA
b) Selective (3 or more)	Energy saving	20% or more electric power consumption is reduced for the processing	Measured under the arbitrary operating condition
	Resources saving (5 items)	Smaller by floor space, or height	Criteria:10% or more reduced (on the design document)
		Reduced number of parts/components (main body, electrical/control, air/hydraulic pressure)	
		Lighter weight (in total weight)	
		Reduced compressed air (initial capacity or gross consumption)	
		Reduced operating fluid, or lubricating oil	
	Environmental protection (4 items)	3dB or more reduction in vibration or noise level when loaded	Measured under set loading condition
		Applicable to safety standard	Applicable to set standard
		Clearing the regulations on hazardous materials	JFMA criteria
		Following EMC	Following EMC test standard, CE
c) Recommended 3 (or 2) or more	Equipped with the devices/functions to meet with the energy/resources saving, and/or environmental protection		Arbitrary presentation

(6) Procedures for the use of the certification mark

System procedures are shown on the right.

- A member company applies for the certification in the designated format sheet with evidence.
- Certification Council evaluates the application and certify that the product is applicable.
- The association secretariat releases the criteria-met confirmation sheet with the certification mark showing the certification register number.
- A member company uses the certification mark and proclaims the applied product that meets with the MF Eco machine criteria.



### 3. Inquiry:

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