Arc Welding Machine Offering Energy-efficiency through Use of phase-advance Capacitors

Registration No.	Number 00239		
Registration Date	September 12, 2017	Registration Category	Category 1

Name (Model, etc.)	high-power-factor arc welding machine LAW-300-3
Location	Toyonaka-shi, Osaka Panasonic Connect Co., Ltd.
Owner (Custodian)	Panasonic Connect Co., Ltd.
Manufacturer (Company)	Matsushita Electric Industrial Co., Ltd.
Year Manufactured	1961
Year first appeared	1957
Reason For Selection	Arc welding using capacitor discharge techniques plays a major role in practically every field of industry. With alternating current arc welding systems, the electrical discharge becomes extinguished every time the electric current changes polarity. So such systems required excessive electricity consumption above and beyond that required for the task at hand in order to obtain the high voltage necessary to enable high discharge by means of electrical reactance, where voltage induces a phase difference delay with respect to the AC waveform. This arc welding machine is the world's first high-power-factor movable iron core type AC arc welding machine which consumes substantially less power by making use of a phase-advance capacitor which eliminates phase difference. It is historically significant in that it exemplifies progress achieved with respect to welding technology.
Registration Standard	1-A (Show an important aspect or stage of the development of science and technology.)

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