

ELECTRON BEAM ACCELERATOR FOR RADIATION PROCESSING (IRA/8/013) F5

New

CORE FINANCING

YEAR	Experts		Group Activity	Equipment	Fellowships		Scientific Visits		Group Training	Sub-Contracts	Misc. Comp.	TOTAL
	m/d	US \$	US \$	US \$	m/d	US \$	m/d	US \$	US \$	US \$	US \$	US \$
1997	2/0	26,400	0	100,000	8/0	25,200	0/15	4,800	0	0	0	156,400
1998	1/0	13,950	0	100,000	0/0	0	0/0	0	0	0	0	113,950
1999	1/15	22,050	0	100,000	0/0	0	1/0	10,800	0	0	0	132,850

First Year Approved: 1997

OBJECTIVES: To establish a national electron accelerator facility in order to introduce electron beam radiation processing applications and to promote the technology for industrial-scale production of polymer materials and products.

BACKGROUND: The application of nuclear techniques in industry is supported by the Government, and substantial R&D work has already been done by the Atomic Energy Organization of Iran (AEOI) in the field of polymer modification, with the aim of improving the quality of local low grade woods and certain wood-related materials and to promote radiation-induced polymerization. These activities, mainly carried out by gamma irradiation, could be expanded to other areas of radiation processing by means of a multipurpose electron accelerator facility. The Government intends to establish a national electron accelerator facility near the industrial city of Yazd in order to introduce electron beam (EB) radiation processing and to promote development of new polymer materials and products for industrial-scale production. An EB accelerator has already been purchased from national resources.

NATIONAL COMMITMENT: An EB accelerator and a building with facilities, including radiation shielding, to house it; funds in trust if required.

AGENCY INPUT: Expert advice and training in the use of the EB accelerator for various industrial applications; some laboratory test equipment and irradiation conveyors for wires and tubes.

PROJECT IMPACT: Successful adoption of radiation processing technology in Iran will lead to industrial applications in areas such as the polymer and plastic industry, wire and cable industry, as well as R&D capabilities for sterilization of medical disposables, waste treatment, and flue gas treatment.