

# Minerals Processing Solutions

Copper  
Iran

**Customer:** Ministry of Mines and Metals, National Iranian Copper Ind. Co., Iran  
MIDUK Consolidated Copper Mine Co.

**Project type:** Greenfield

**Plant:** Desert area, Iran

**Ore:** Copper Ore

**Scope of supply:** Basic engineering, project management and main process & electrical equipment. Start up and commissioning, Auxiliaries equipment: Rock breaker, Blowers, Samplers, Belt scales, screw feeders, High rate tailing thickeners, Flockulant stations, Hydrocyclones, scrap magnet, Power works MCC, Transformers and electrical installation. DCS control system by Alstom/Cegelec.

**Equipment & process:**

Primary crusher, S-54-75.  
Apron feeders 2 x 1,5 m x 6 m,  
Vibrating feeders VMOK 20/12,5 -45 2 x 1,25 m x 2 m.  
Primary SAG mill, 9,75 m x 3,90 m, 2x3500 kW.  
Secondary ball mill 5,00 m x 7,60 m, 3000 kW  
Regrind ball mill 3,30 m x 5,20 m, 750 kW  
Rougher flotation cells, 5 x Column 4 m x 12 m  
Rougher scavenger flotation cells, 10 x RCS 50 m<sup>3</sup>.  
Cleaner scavenger flotation cells, 6 x RCS 50 m<sup>3</sup>.  
Cleaner flotation cells, 3 x Column 3,2 m x 12 m  
Concentrate thickeners, dia. 12 m  
Concentrate pressure filters, 3 x VPA 1530-36  
Conditioners and surge tanks, Slurry



pumps, Slurry piping  
Spare and wear parts for commissioning and 2 years of operation.  
Off-site and on-site training.  
Erection and commissioning supervision.

**Benefits:** 30% Cu in concentrate  
Recovery 90%  
Concentrate moisture 8%  
Electrical power consumption 35 kWh/t (625 t/h dry basis).

**Year:** Contract year 1997  
Commissioning/start up 2004 - 2005.

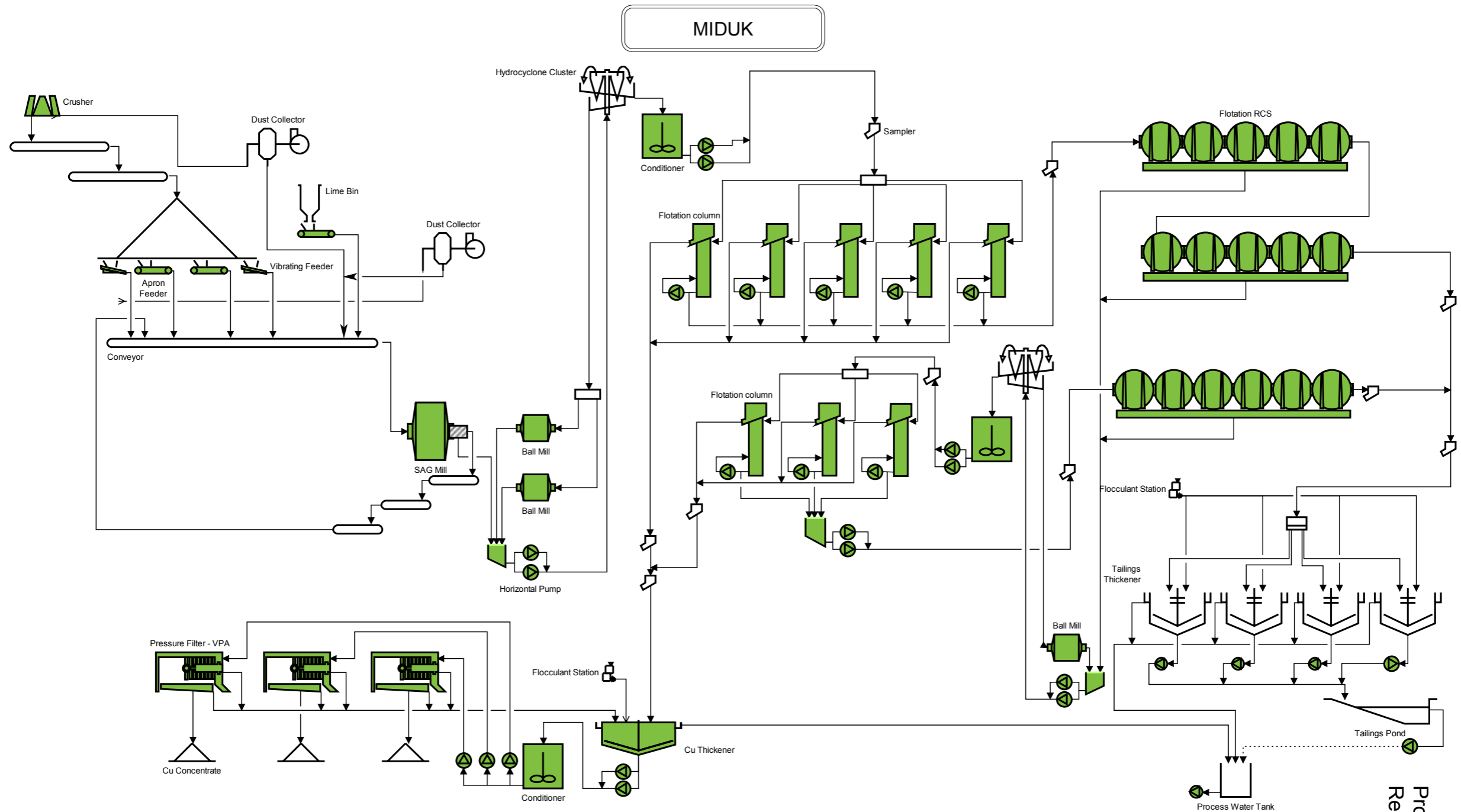


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Project summaries  
Recovery of Cu ore