

ENTRY NO. CU6 Date June 19, 1992
 Name of Machine CGR-MeV 9305
 Institution MDS NORDION S.A.
 Address B-6220 FLEURUS (Belgium)
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 In Charge: C. PIRART Reported by: C. PIRART

HISTORY
 MILESTONE DATES:
 Design 1980 Model Tests
 Construction 1981-1983 First Beam 1983
 DESIGN/CONSTRUCTION BY:
 in house other
 COST: Accelerator 6 M. US\$ Facility 12 M. US\$
 FUNDED BY:

STATUS
 STAFF: Machine
 Scientists Engineers
 Technicians Students
 Research (in house/external)
 Scientists / Engineers /
 Technicians / Students /
 BUDGET: Machine Funded by
 Research Funded by
 TIME DISTRIBUTION:
 Basic Research (in house/external) 100 % / %
 Applied Program (in house/external) % / %
 Development % Maintenance %

MAGNET
 POLE PARAMETERS:
 Diameter 215.6 cm R_{extract} 92.4 cm R_{inject} cm
 HILL PARAMETERS: Gap (min) 16.6 cm B_{max} 2.15 T
 (0 AT) Gap (max) 40.5 cm B_{min} 1.15 T
 VALLEY PARAMETERS: Gap (min) cm B_{max} T
 (0 AT) Gap (max) cm B_{min} T
 AVERAGE FIELD: < B > min T < B > max T
 NUMBER OF SECTORS: compact/separated /
 sector angle deg. spiral (max) 53 deg.
 FIELD TRIMMING: Trim Coils 12 pairs
 Harmonic Coils centering 4 pairs Ext. 4 pairs
 Other
 CURRENT: Main Coils 1100 Amps Stability 10⁻⁵
 Trim Coils 300 Amps Stability 10⁻³
 Stored Energy (cryogenic) MJ
 WEIGHT: Iron 200 T Conductor Cu
 ION ENERGY: Bending Limit E/A = 110 q²/A² MeV/u
 Focussing Limit E/A = 80 q/A MeV/u

ACCELERATION SYSTEM
 FUNDAMENTAL ACCELERATION:
 Description:
 No. of Gaps/turn 4 dE/dn(max) 0.15 MeV/q
 Voltage(max) 0.05 MV Harmonic f_r/f_{ion} 1.11
 Freq 10.6-23 MHz Power in(max) 0.14 MW
 Stability: Phase 0.1° Voltage < 10⁻³
 OTHER CAVITIES (Flattopping or otherwise):
 Description:
 Region of Influence: R_{min} cm R_{max} cm
 No. of Gaps/turn dE/dn(max) MeV/q
 Voltage(max) MV Harmonic f_r/f_{ion}
 Freq MHz Power in(max) MW
 Stability: Phase Voltage

VACUUM SYSTEM
 OPERATING PRESSURE: 2.10-6
 PUMPS: No. and type 2 x OIL DJF 12000 .l/s

ION SOURCE(S)
 Type Intensity (mA) $\epsilon_n = \beta\gamma\epsilon$ (mm mrad) Ion Species
 (a) L.I.V.-JONES 0.1 10000 P₁P₂P₃P₄P₅P₆
 (b)
 (c)
 (d)

INJECTION SYSTEM
 Efficiency %

EXTRACTION SYSTEM
 DC electrostat. + ach. magn. channel Efficiency 60 %

CHARACTERISTIC BEAMS
 Accelerated Ions E/A (MeV/u) Current (part μ A) Internal External
 (a) P 80 700 50
 (b)
 (c)
 (d)
 Secondary Particles E (MeV) part/sec
 (a)
 (b)
 (c)

EXTRACTED BEAM PROPERTIES:
 For μ A of MeV/u ions
 $\Delta E/E$ % $\Delta\phi$ °rf
 $\epsilon_n = \beta\gamma\epsilon$ x π mm mrad z π mm mrad

FACILITIES FOR RESEARCH
 SHIELDED AREA: Fixed 4 m² Moveable 1 m²
 Target Stations: 4 No. Served At Same Time: 1
 MAGNETIC SPECTROMETERS:
 OTHER FACILITIES:

REFERENCES/NOTES
 (a)
 (b)

PLAN VIEW OF FACILITY, COMMENTS

