ENTRY NO. CM18 Date

Machine Name MC30 p. fixed Energy

Manufacturer Scanditronix

Address Husyborg, S752 29 Uppsala, Sweden

Tel 46 18 18 0700 Telex

Fax 46 18 53 7276 EMAIL

In Charge: Reported by: Jonas Modéer

HISTORY AND STATUS

DATES: Design 1987 First Machine 1988

SALES: No. Sold/Operational 1 / 1 Currently Available Y

COST: Accelerator Facility

MAGNET

POLE PARAMETERS:

Diameter 130 cm $R_{extract}$ cm R_{inject} cm

HILL PARAMETERS: Gap (min) 10 cm B_{max} T

(@ AT) Gap (max) cm B_{min} T

VALLEY PARAMETERS: Gap (min) 18 cm B_{max} T

(@ AT) Gap (max) cm B_{min} T

AVERAGE FIELD: $< B >_{min}$ 1.4 T $< B >_{max}$ T

NUMBER OF SECTORS: compact/separated 3 /

sector angle deg. spiral (max) 50 deg.

FIELD TRIMMING: Trim Coils 5

Harmonic Coils 2

Other 5

CURRENT: Main Coils 600 Amps Stability 10

Trim Coils Amps Stability

Stored Energy (cryogenic) MJ

WEIGHT: Iron 69,000 kg Conductor

ION ENERGY: Bending Limit E/A = q^2/A^2 MeV/u

Focussing Limit E/A = q/A MeV/u

ACCELERATION SYSTEM

FUNDAMENTAL ACCELERATION:

Description: Driven System

No. of Gaps/turn 4 dE/dn(max) 0.1 MeV/q

Voltage(max) 0.035 MV Harmonic f_{rf}/f_{ion} 1

Freq MHz Power in(max) MW

Stability: Phase Voltage

VACUUM SYSTEM

OPERATING PRESSURE: 10^{-5} - 10^{-6}

PUMPS: No. and type 2 x 4000 ℓ/sec Diff pump

ION SOURCE(S)

	Type	Intensity (mA)	@ $\epsilon_n = \beta\gamma\epsilon$ (π mm mrad)	Ion Species
(a)	Hot filament	0.3		P
(b)				

INJECTION SYSTEM

Efficiency - %

EXTRACTION SYSTEM

Efficiency - %

CHARACTERISTIC BEAMS

	Accelerated Ions	E/A (MeV/u)	Current(part. μA) Internal	External
(a)	P	30	500	-
(b)				

EXTRACTED BEAM PROPERTIES:

For μA of MeV/u ions

$\Delta E/E$ % $\Delta\phi$ °rf

$\epsilon_n = \beta\gamma\epsilon$ x πmm mrad z πmm mrad

REFERENCES/NOTES

(a)

(b)

ENTRY NO. CM19 Date

Machine Name MC 32 NI

Manufacturer Scanditronix

Address Husyborg, S752 29 Uppsala Sweden

Tel 46 18 18 0700 Telex

Fax 46 18 18 7276 EMAIL

In Charge: Reported by: Jonas Modéer

HISTORY AND STATUS

DATES: Design 90 First Machine 90

SALES: No. Sold/Operational 2 / 2 Currently Available Y

COST: Accelerator Facility

MAGNET

POLE PARAMETERS:

Diameter 130 cm $R_{extract}$ 47 cm R_{inject} cm

HILL PARAMETERS: Gap (min) cm B_{max} T

(@ AT) Gap (max) cm B_{min} T

VALLEY PARAMETERS: Gap (min) cm B_{max} T

(@ AT) Gap (max) cm B_{min} T

AVERAGE FIELD: $< B >_{min}$ 1.59 T $< B >_{max}$ T

NUMBER OF SECTORS: compact/separated 4 /

sector angle deg. spiral (max) deg.

FIELD TRIMMING: Trim Coils 3

Harmonic Coils 2

Other

CURRENT: Main Coils 700 Amps Stability

Trim Coils Amps Stability

Stored Energy (cryogenic) MJ

WEIGHT: Iron Conductor

ION ENERGY: Bending Limit E/A = q^2/A^2 MeV/u

Focussing Limit E/A = q/A MeV/u

ACCELERATION SYSTEM

FUNDAMENTAL ACCELERATION:

Description:

No. of Gaps/turn 4 dE/dn(max) 0.1 MeV/q

Voltage(max) 0.035 MV Harmonic f_{rf}/f_{ion} 1

Freq 24 MHz Power in(max) 0.05 MW

Stability: Phase Voltage

VACUUM SYSTEM

OPERATING PRESSURE: $< 10^{-6}$

PUMPS: No. and type 2 x 4000 ℓ/sec diff pump

ION SOURCE(S)

	Type	Intensity (mA)	@ $\epsilon_n = \beta\gamma\epsilon$ (π mm mrad)	Ion Species
(a)	PIG	0.1		H^-, D^-
(b)				

INJECTION SYSTEM

Efficiency %

EXTRACTION SYSTEM

Stripping foils Efficiency %

CHARACTERISTIC BEAMS

	Accelerated Ions	E/A (MeV/u)	Current(part. μA) Internal	External
(a)	H^-	32	60	60
(b)	D	16	60	60

EXTRACTED BEAM PROPERTIES:

For μA of MeV/u ions

$\Delta E/E$ % $\Delta\phi$ °rf

$\epsilon_n = \beta\gamma\epsilon$ x πmm mrad z πmm mrad

REFERENCES/NOTES

(a)

(b)