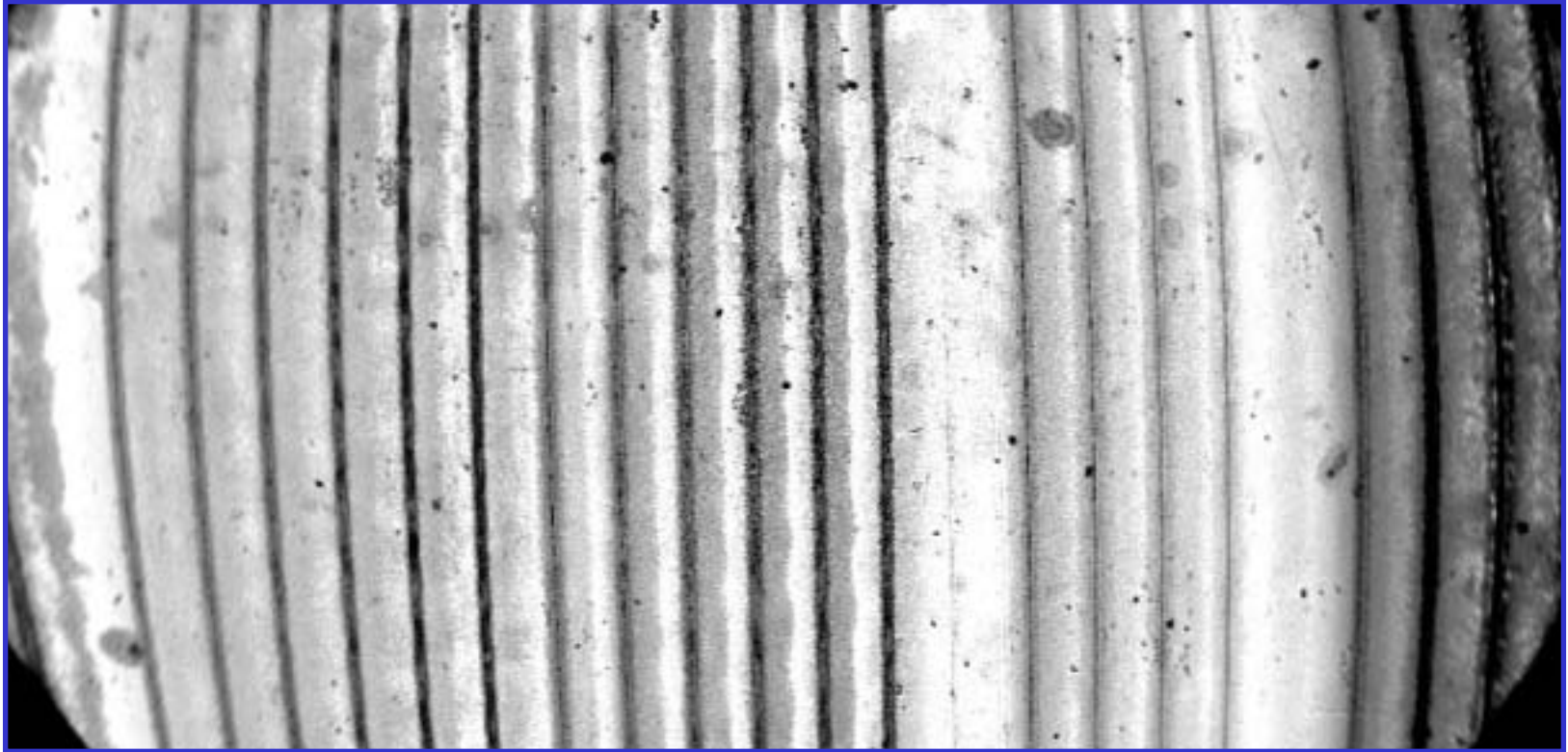


Face-on View of Striping



← Various Cut widths, Powers, and Speeds →

Hyper Tech Research

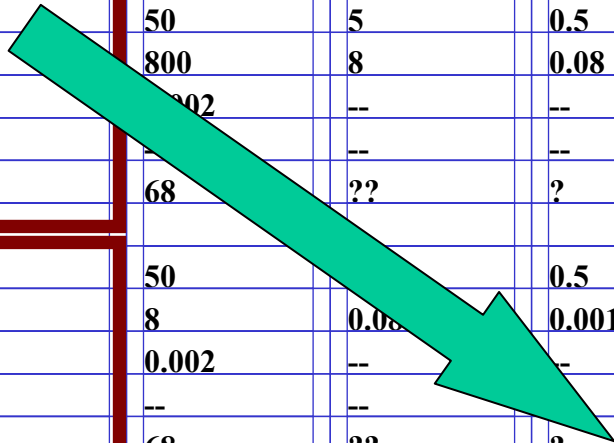


Section III: AC Loss Measurement setup



Condition/
Loss in
mW/m

	P	500 Hz/1 T	500Hz/0.2T	500Hz/.02 T	500Hz/2mT	200 Hz/1 T	200Hz/0.2 T
(1a) Face-on $w = 1 \text{ cm}$ $d_f = 50 \mu\text{m}$	Hyst	2500	500	50	5	1000	200
	E-sub	20,000	800	8	0.08	3,200	128
	E-over	5.3	0.212	.002	--	0.85	0.034
	Coup	--	--	--	--	--	--
	Fe	68	68	??	?	27	27
(1b) Face-on, $w = 1 \text{ cm}$ $d_f = 5 \mu\text{m}$	Hyst	250	50	5	0.5	100	20
	E-sub	20,000	800	8	0.08	3,200	128
	E-over	0.053	0.002	--	--	0.009	--
	Coup	--	--	--	--	--	--
	Fe	68	68	??	?	27	27
(1c) FO 10 strips $w = 1 \text{ mm}$ $d_f = 5 \mu\text{m}$	Hyst	250	50	5	0.5	100	20
	E-sub	200	8	0.08	0.001	32	1.28
	E-over	0.053	0.002	--	--	0.009	--
	Coup	--	--	--	--	--	--
	Fe	68	68	??	?	27	27
(2) Edge-on	Hyst	100	20	2	0.02	40	8
	E-sub	0.5	0.02	--	--	0.08	0.003
	E-over	0.019	0.001	--	--	0.003	--
	Coup	--	--	--	--	--	--
	Fe	68	68	??	?	27	27
(3a) I_{AC} , SF $i=0.5$	$SF(1a,b)$	88	88	88	88	88	88
	$SF(1c)$	8.8	8.8	8.8	8.8	8.8	8.8
(3a) I_{AC}/H_{AC} , FO $i=0.5$	$INT(1a)$	208	41.6	4.16	0.416	83	16.6
	$INT(1b)$	20.8	4.16	0.416	0.042	8.3	1.66
	$INT(1c)$	20.8	4.16	0.416	0.042	8.3	1.66



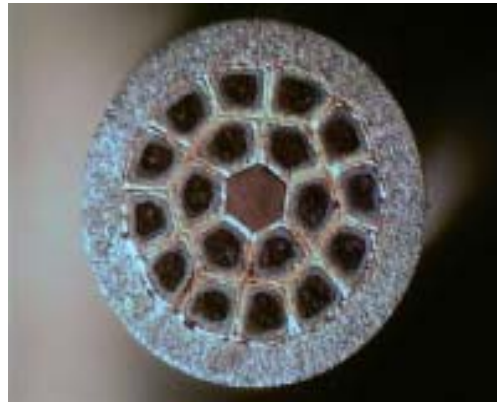
Multifilament Strands

7 filaments



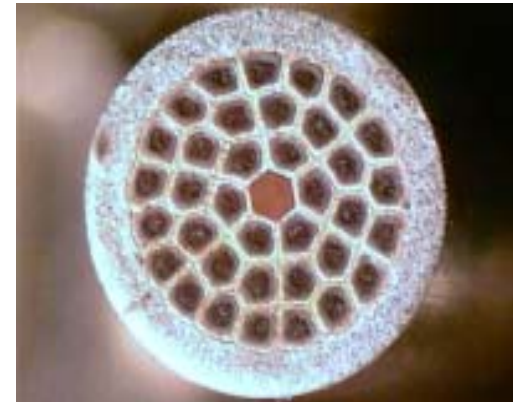
Fe-CTFF in Cu tube
Restacked in CuNi

18 filaments with Cu center



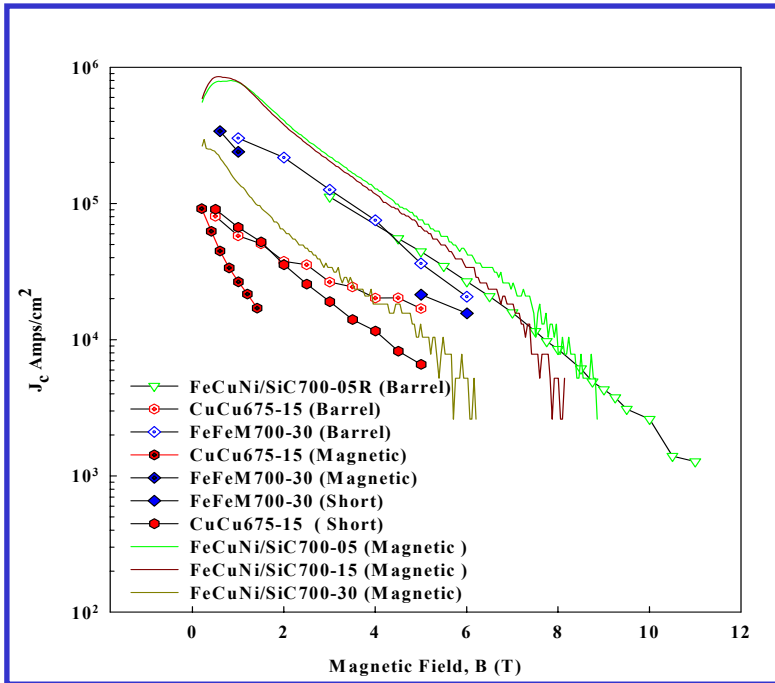
Nb-CTFF in Cu tube
Restacked in CuNi

36 filaments with Cu center

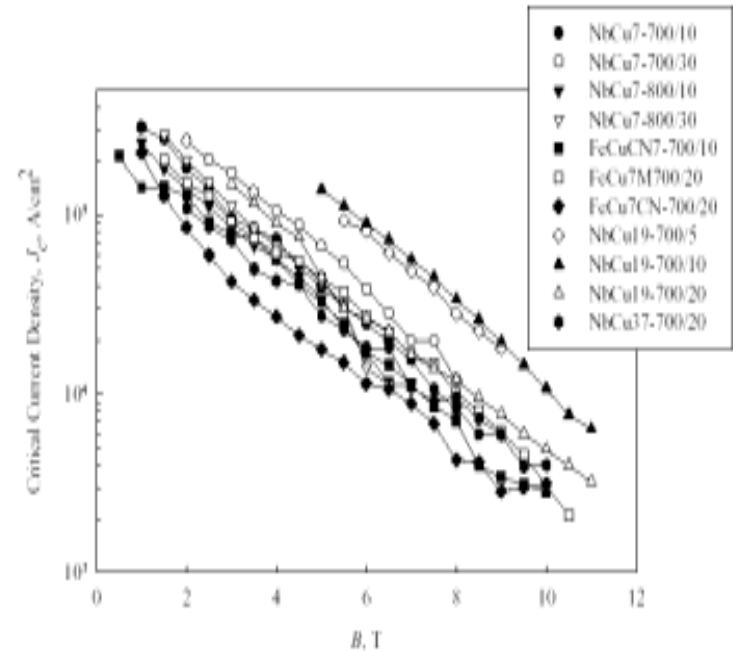


Nb-CTFF in Cu tube
Restacked in CuNi

4.2 K Short Sample, Barrel, and Magnetic J_c



Monofilament Wires



Multifilament Wires



Current MgB₂ Projects

Air Force SBIR Phase II - MgB₂ for MHD Coils

**Navy STTR Phase II- MgB₂ for Inductors, Reactors,
and Transformer Coils**

NASA SBIR Phase II – MgB₂ for Motor Rotor Coils

NIH SBIR Phase I- MgB₂ for Open MRI Coils

NASA SBIR Phase I – MgB₂ for ADR Coils

Air Force SBIR Phase I –MgB₂ for Gyrotron Coils

**Subcontractor to MIT on NIH project to demonstrate
80 cm bore MgB₂ MRI Coil**