

RFT Probes

RFT probes are used to detect defects in ferromagnetic tubes, such as carbon steel tubes. The probes consist of both bobbin coils and arrays, which are used to detect both local wall loss (LWL) and general wall loss (GWL). Bobbin coils can detect both LWL and GWL while Differential coils and coil arrays are able to detect small volume LWL, such as pits. Both coils record data simultaneously.

Highlights:

- ✓ Used for Ferromagnetic tubes
- ✓ Flexible probes for U-bend navigation
- ✓ Array probes
- ✓ 3D colour maps



RFT Probe Options (above) from top left to bottom right:
Array Rigid, Dual Exciter Flexible, Array Flexible



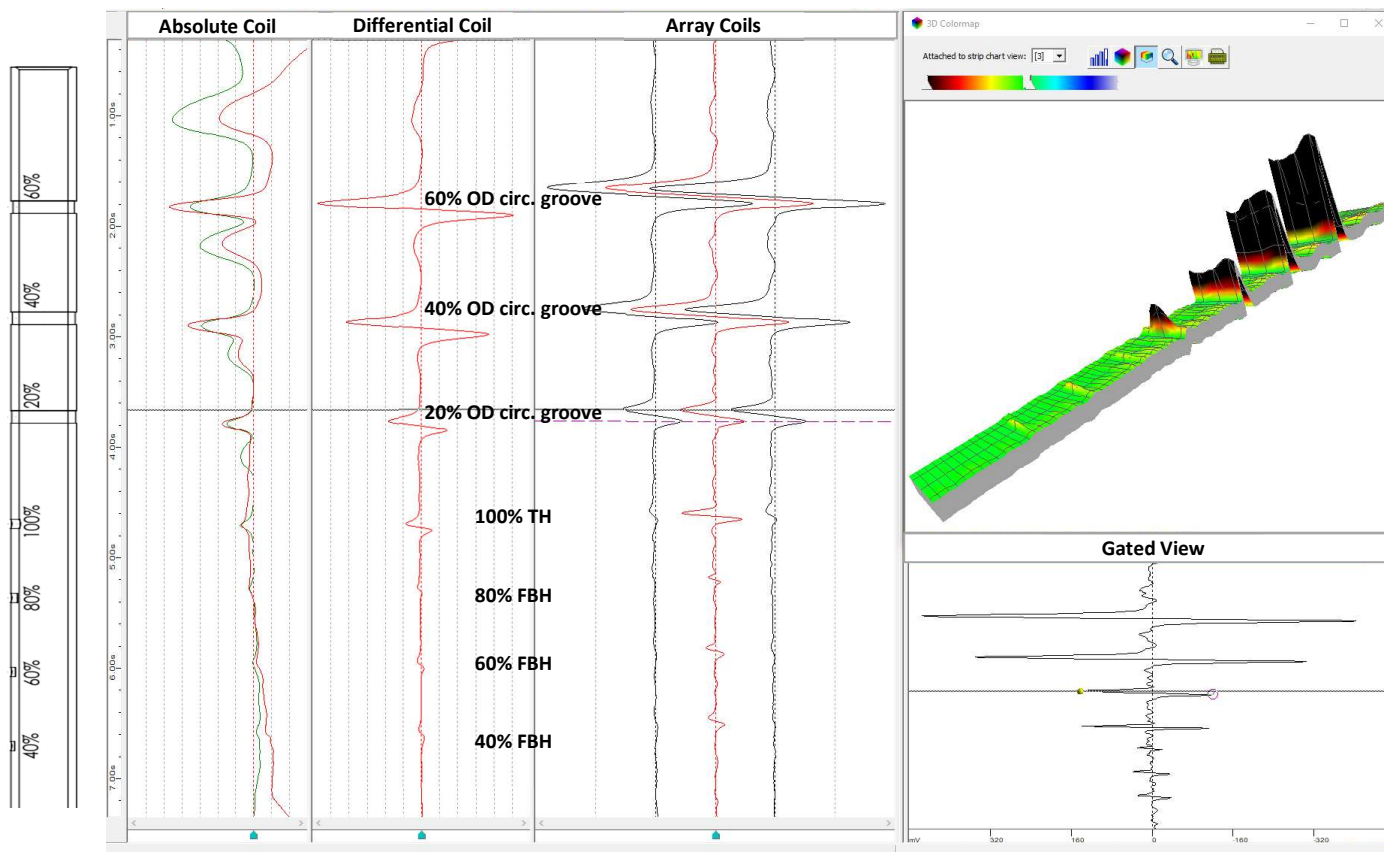
Single Exciter Flexible RFT Probe



Single Exciter Rigid RFT Probe



Dual Exciter Rigid RFT Probe



RFT Data screencap with colormap

FBH – Flat Bottom Hole
TH – Through Hole

ID – Inner Diameter
OD – Outer Diameter

Application: Ferromagnetic materials

Tube Size Range: 0.375" to 3.00" (9.53 mm to 76.20 mm)

Tube Wall Thickness Range: 0.035" to 0.165" (0.89 mm to 4.19 mm)

Probe Options: Rigid, Flexible, Multichannel detector array

Types of Defects Detectable: Internal and External pitting and wall loss
 Equal sensitivity to internal/external defects

Operating Frequency: 10 Hz to 20 kHz

Operating Temperature: -22 to 149°F (-30 to 65°C)

Standard Cable Lengths: 50 ft & 65 ft

Russell NDE Systems Inc. provides a range of standard probe sizes as well as custom probe sizes based on customer requirements.

RFT – Standard Probe Selection Chart. Probes are generally made to 85% fill factor

Tube Wall Thickness			Tube Outside Diameter – in. (mm)											
BWG	In. (mm)		0.5 (12.7)	0.625 (15.87)	0.75 (19.05)	1 (25.4)	1.25 (31.75)	1.5 (38.1)	1.75 (44.45)	2 (50.8)	2.25 (57.15)	2.5 (63.5)	2.75 (69.85)	3 (76.2)
24	0.022	(0.56)	0.400	0.525	0.650	0.875	1.100	1.325	1.550	1.800	2.025	2.250	2.475	2.725
23	0.025	(0.65)	0.400	0.525	0.625	0.875	1.100	1.325	1.550	1.775	2.025	2.250	2.475	2.700
22	0.028	(0.71)	0.400	0.525	0.625	0.850	1.100	1.325	1.550	1.775	2.000	2.250	2.475	2.700
21	0.032	(0.81)	0.400	0.500	0.625	0.850	1.075	1.300	1.550	1.775	2.000	2.225	2.475	2.700
20	0.035	(0.89)	0.375	0.500	0.625	0.850	1.075	1.300	1.525	1.775	2.000	2.225	2.450	2.700
19	0.042	(1.07)	0.375	0.475	0.60	0.825	1.075	1.300	1.525	1.750	1.975	2.225	2.450	2.675
18	0.049	(1.24)	0.350	0.475	0.600	0.825	1.050	1.275	1.500	1.750	1.975	2.200	2.425	2.675
17	0.058	(1.47)	0.350	0.450	0.575	0.800	1.025	1.275	1.500	1.725	1.950	2.175	2.425	2.650
16	0.065	(1.65)	0.325	0.450	0.550	0.800	1.025	1.250	1.475	1.700	1.950	2.175	2.400	2.625
15	0.072	(1.83)	0.325	0.425	0.550	0.775	1.000	1.250	1.475	1.700	1.925	2.150	2.400	2.625
14	0.083	(2.11)	0.300	0.400	0.525	0.750	0.975	1.225	1.450	1.675	1.900	2.150	2.375	2.600
13	0.095	(2.41)	0.275	0.400	0.500	0.725	0.975	1.200	1.425	1.650	1.875	2.125	2.350	2.575
12	0.109	(2.77)	0.250	0.375	0.475	0.700	0.950	1.175	1.400	1.625	1.850	2.100	2.325	2.550
11	0.120	(3.05)	0.225	0.350	0.450	0.700	0.925	1.150	1.375	1.600	1.850	2.075	2.300	2.525
10	0.134	(3.40)	0.200	0.325	0.425	0.675	0.900	1.125	1.350	1.575	1.825	2.050	2.275	2.500
9	0.148	(3.76)	0.175	0.300	0.400	0.625	0.875	1.100	1.325	1.550	1.800	2.025	2.250	2.475
8	0.165	(4.19)	0.150	0.250	0.375	0.600	0.825	1.075	1.300	1.525	1.750	2.000	2.225	2.450

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Russell NDE Systems is the industrial World Leader in NDT services and equipment, with over 40 years of professional industry experience in non-destructive testing and evaluation.