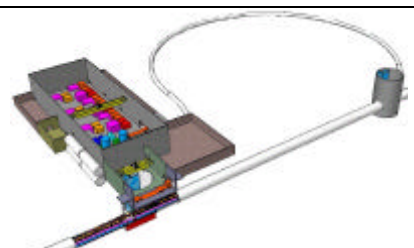
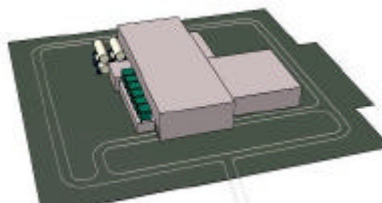



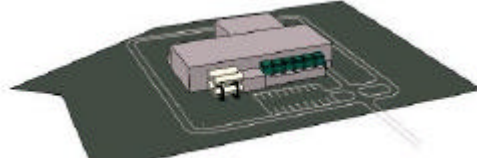
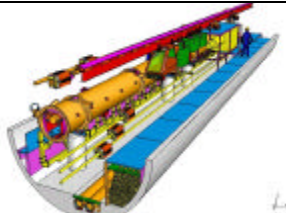
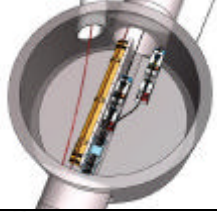
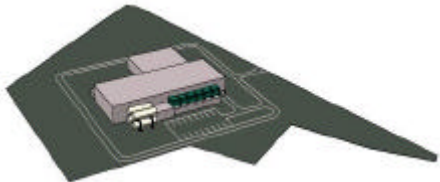
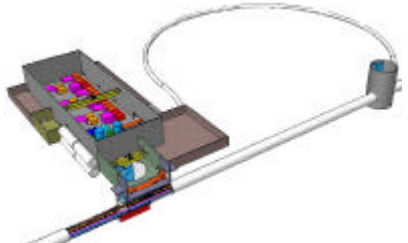
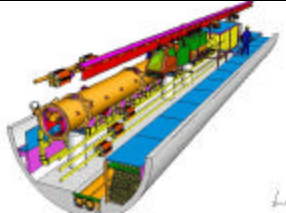
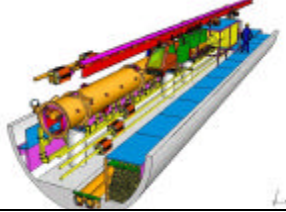
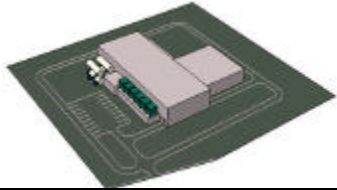
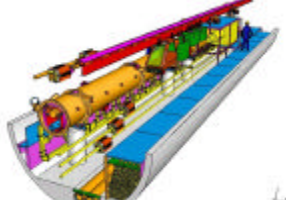


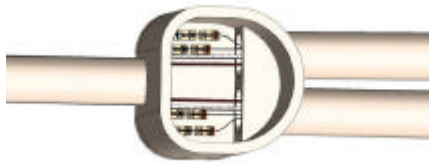
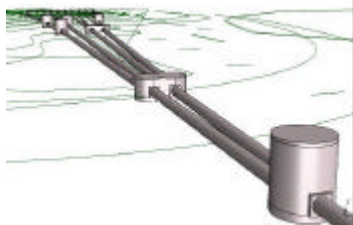
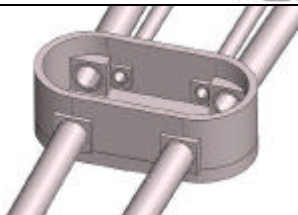
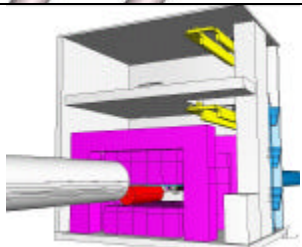

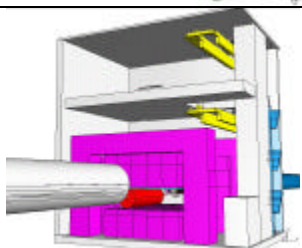
TESLA Buildings

Building	Position	Volume	Sketch
Damping ring tunnel, unit 1	0 m	$d_i = 3$ m, $R = 160$ m, $l = 930$ m	
Injector tunnel	0 m	Number: 3, $d_i = 5.2$ m, $l = 85$ m	
Injector shaft	0 m	Number: 3, $d_i = 15$ m, $h = 22$ m	
Cryo hall “DESY” and shaft	0 m	$32 \times 85 \times 10$ m ³ , $35 \times 35 \times 5$ m ³ , $d_i = 15$ m, $h = 22$ m	
Temporary shaft “DESY”	100 m	$d_i = 15$ m, $h = 22$ m	
Connection tunnel to HERA	100 m to 300 m	$d_i = 3$ m, $l = 200$ m	
Temporary shaft for Connection tunnel to HERA	300 m	$d_i = 15$ m, $h = 22$ m	
Tunnel section, unit 1	0 m to 2 500 m	$d_i = 5.2$ m, $l = 2 500$ m	
Tunnel section, unit 2	2 500 m to 5 000 m	$d_i = 5.2$ m, $l = 2 500$ m	
Cryo hall “Halstenbek-Süd” and shaft	5 000 m	$32 \times 85 \times 10$ m ³ , $35 \times 35 \times 5$ m ³ , $d_i = 15$ m, $h = 29$ m	

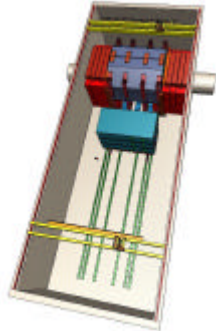
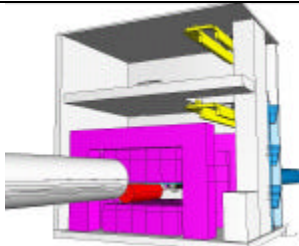
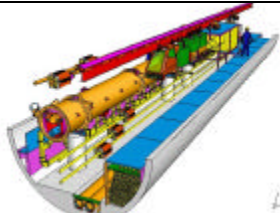
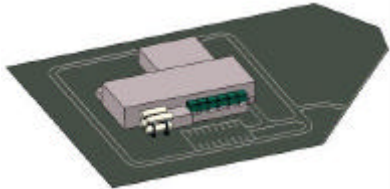

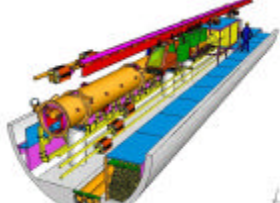
TESLA Buildings (Continuation)

Tunnel section, unit 3	5 000 m to 7 500 m	$d_i = 5.2$ m, $l = 2\,500$ m	
Temporary shaft “Halstenbek-Nord”	7 200 m	$d_i = 15$ m, $h = 25$ m	
Cryo hall “Halstenbek-Nord” and shaft	7 500 m	$32 \times 85 \times 10$ m ³ , $35 \times 35 \times 5$ m ³ , $d_i = 15$ m, $h = 25$ m	
Damping ring tunnel, unit 3	7 500 m	$d_i = 3$ m, $R = 160$ m $l = 930$ m	
Tunnel section, unit 4	7 500m to 10 000 m	$d_i = 5.2$ m, $l = 2\,500$ m	
Tunnel section, unit 5	10 000 m to 12 500 m	$d_i = 5.2$ m, $l = 2\,500$ m	
Cryo hall “Borstel” and shaft	12 500 m	$32 \times 85 \times 10$ m ³ , $35 \times 35 \times 5$ m ³ , $d_i = 15$ m, $h = 28$ m	
Tunnel section, unit 6	12 500 m to 15 000 m	$d_i = 5.2$ m, $l = 2\,500$ m	

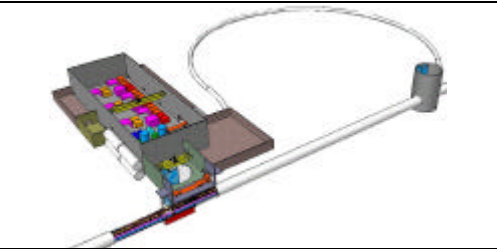
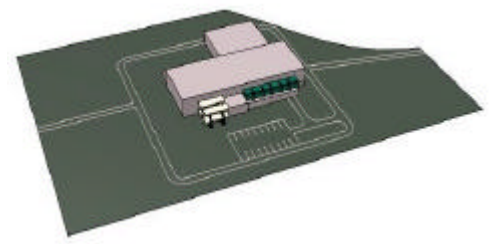
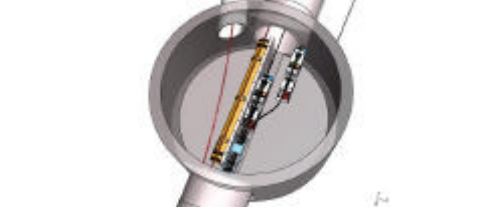
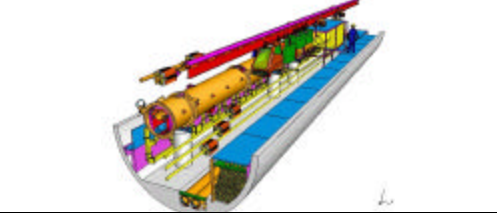
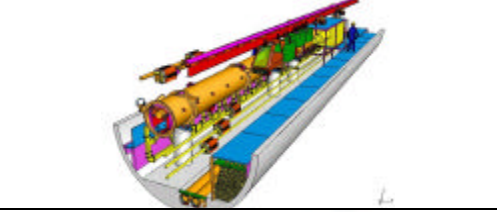
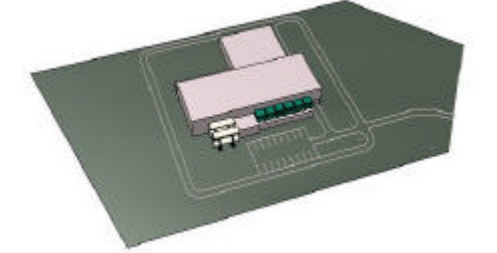

TESLA Buildings (Continuation)

Tunnel Electron final focus	15 000 m to 16 800 m	$d_i = 5.2$ m, $l = 1\ 800$ m	
X-FEL Separation shaft	about 15 700 m	$d_i = 15$ m, $h = 20$ m	
X-FEL Connection tunnel	about 15 700m to 16 100 m	$d_i = 5.2$ m, $l = 400$ m	
X-FEL Distribution tunnels	about 16100 m to 17300 m	$d_i = 3$ m, $l = 700$ m	
X-FEL Access shafts	about 16 100 m to 16 400 m	Anzahl: 4, $d_i = 15$ m, $h = 10$ m	
X-FEL Dump building	about 16 900 m	Anzahl: 4 , $25 \times 20 \times 10$ m ³	
X-FEL Experimental hall	about 17 300 m	$45 \times 200 \times 15$ m ³	
Positron dump building	About 16 500 m	$30 \times 25 \times 15$ m ³	

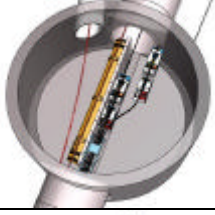

TESLA Buildings (Continuation)

Detector hall	about 16 800 m	82 x 32 x 22 m ³	
Bypass tunnel for Positron source	16 550 m to 17 050 m	$d_i = 3$ m, $l = 500$ m	
Elektron dump building	about 17 100 m	30 x 25 x 15 m ³	
Tunnel Positron final focus	16 800 m to 18 000 m	$d_i \approx 5.2$ m, $l = 1\,200$ m	
Separation shaft for 2. Interaction region tunnel	About 15 700 m	$d_i \approx 15$ m, $h = 30$ m	
Tunnel section, unit 7	18 000 m to 20 500 m	$d_i \approx 5.2$ m, $l = 2\,500$ m	
Cryo hall "Bevern" and shaft	20 500 m	32 x 85 x 10 m ³ , 35 x 35 x 5 m ³ , $d_i \approx 15$ m, $h = 25$ m	
Tunnel section, unit 8	20 500 m to 23 000 m	$d_i \approx 5.2$ m, $l = 2\,500$ m	
Tunnel section, unit 9	23 000 m to 25 500 m	$d_i \approx 5.2$ m, $l = 2\,500$ m	

TESLA Buildings (Continuation)

Damping ring tunnel, unit 10	25 500 m	$d_i = 3$ m, $R = 160$ m $l = 930$ m	
Cryo hall "Vossloch" and shaft	25 500 m	$32 \times 85 \times 10$ m ³ , $35 \times 35 \times 5$ m ³ , $d_i \approx 15$ m, $h = 28$ m	
Temporary shaft "Vossloch"	25 800 m	$d_i \approx 15$ m, $h = 28$ m	
Tunnel section, unit 10	25 500 m to 28000 m	$d_i \approx 5.2$ m, $l = 2 500$ m	
Tunnel section, unit 11	28 000 m to 30300 m	$d_i \approx 5.2$ m, $l = 2 300$ m	
Cryo hall "Bokelsess" and shaft	30 300 m	$32 \times 85 \times 10$ m ³ , $35 \times 35 \times 5$ m ³ , $d_i \approx 15$ m, $h = 21$ m	
Tunnel section, unit 12	30 300 m to 32800 m	$d_i \approx 5.2$ m, $l = 2 500$ m	

TESLA Buildings (Continuation)

Temporary shaft "Westerhorn"	32 500 m	$d_i \approx 15$ m, $h = 21$ m	
Access hall "Westerhorn" and shaft	32 800 m	$20 \times 20 \times 6$ m ³ , $d_i \approx 15$ m, $h = 21$ m	
Damping ring tunnel, unit 12	32 800 m	$d_i = 3$ m, $R = 160$ m $l = 930$ m	

Total volume of TESLA: 1.3×10^6 m³