



INNOVATION TO MAKE IT FIRST, QUALITY TO MAKE IT LAST.

## Section 7: Estimating Shop Tank Lining Estimate Sheet

Customer: \_\_\_\_\_ Date: \_\_\_\_\_  
 Location: \_\_\_\_\_ Dwg No: \_\_\_\_\_  
 Service Conditions: \_\_\_\_\_  
 Rubber Gauge: \_\_\_\_\_ Spec: \_\_\_\_\_ Per: \_\_\_\_\_  
 Description: \_\_\_\_\_  
 Sq. Ft. Area: \_\_\_\_\_ Plus \_\_\_\_\_ % Trim = \_\_\_\_\_ Total Sq. Ft.

### MATERIAL ESTIMATE

Supplies \_\_\_\_\_

Rubber-Sq. Ft. \_\_\_\_\_ @ \$ \_\_\_\_\_ / sq. ft. = \$ \_\_\_\_\_

Cements - \_\_\_\_\_ - \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 \_\_\_\_\_ - \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 \_\_\_\_\_ - \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 \_\_\_\_\_ - \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_

TOTAL MATERIAL COST - \$ \_\_\_\_\_

### LABOR ESTIMATE

	No. of Men	No. of Days	S.T.	O.T.
Unload	_____	_____	- _____ hr.	_____ hr.
Inshop Rigging & Handling			- _____ hr.	_____ hr.
Blasting			- _____ hr.	_____ hr.
Cementing			- _____ hr.	_____ hr.
Lining - Straight Work			- _____ hr.	_____ hr.
Lining - Outlets			- _____ hr.	_____ hr.
Lining - Brackets, Baffles, etc.			- _____ hr.	_____ hr.
Curing			- _____ hr.	_____ hr.
Inspection			- _____ hr.	_____ hr.
Loading			- _____ hr.	_____ hr.
Miscellaneous			- _____ hr.	_____ hr.
TOTAL LABOR HOURS _____			@ \$ _____ S.T. = _____	
TOTAL LABOR HOURS _____			@ \$ _____ O.T. = _____	
TOTAL LABOR HOURS _____			@ \$ _____ D.T. = _____	
Plus _____ % S & A			= \$ _____	
Subtotal Labor & S & A			\$ _____	
ALL IN COST			\$ _____	
PLUS _____ % PROFIT			\$ _____	

### FABRICATION

Fabricator \_\_\_\_\_ Cost \$ \_\_\_\_\_  
 Mark Up \_\_\_\_\_ % \$ \_\_\_\_\_  
 TOTAL METAL COST \$ \_\_\_\_\_  
 Freight \$ \_\_\_\_\_ MU \_\_\_\_\_ = \$ \_\_\_\_\_

### EXTERIOR COATING

Blast \_\_\_\_\_ hrs. @ \$ \_\_\_\_\_ hr. \$ \_\_\_\_\_  
 Labor to Apply \_\_\_\_\_ hrs. @ \$ \_\_\_\_\_ hr. \$ \_\_\_\_\_  
 S & A \_\_\_\_\_ % \$ \_\_\_\_\_  
 SUBTOTAL \$ \_\_\_\_\_  
 MATERIAL \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ \$ \_\_\_\_\_

**SUBTOTAL \$ \_\_\_\_\_**



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**SUPPLIES**

**Solvents**

Insol III \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 M E K \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 Toluene \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_

**SUBTOTAL \$** \_\_\_\_\_

**Application Supplies**

Grinding Stones \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 Grinding Discs \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 4" Brushes \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 2" Brushes \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 Roller Frames \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 Roller Covers \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_

**Miscellaneous Supplies**

5-Gallon Cans \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 1-Gallon Cans \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 1-Quart Cans \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 Work Gloves \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 Rags/Bundles \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_  
 Sand \_\_\_\_\_ @ \_\_\_\_\_ = \_\_\_\_\_

**SUBTOTAL \$** \_\_\_\_\_

**Exterior Coatings**

Primer Coat \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 Intermediate Coat \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 Top Coat \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_

**SUBTOTAL \$** \_\_\_\_\_

**TOTAL (FRONT) \$** \_\_\_\_\_

**PROFIT** \_\_\_\_\_ % \$ \_\_\_\_\_

**TOTAL \$** \_\_\_\_\_



INNOVATION TO MAKE IT FIRST, QUALITY TO MAKE IT LAST.

## Section 7: Estimating Field Tank Lining Estimate Sheet

Customer: \_\_\_\_\_ Date: \_\_\_\_\_  
 Location: \_\_\_\_\_ Dwg No: \_\_\_\_\_  
 Service Conditions: \_\_\_\_\_  
 Rubber Gauge: \_\_\_\_\_ Spec: \_\_\_\_\_ Per: \_\_\_\_\_  
 Description: \_\_\_\_\_  
 Sq. Ft. Area: \_\_\_\_\_ Plus \_\_\_\_\_ % Trim = \_\_\_\_\_ Total Sq. Ft.

SUPPLIES: \_\_\_\_\_ (From Back)

**MATERIAL ESTIMATE**

Supplies \_\_\_\_\_

Rubber-Sq. Ft. \_\_\_\_\_ @ \$ \_\_\_\_\_ / sq. ft. = \$ \_\_\_\_\_

Cements - \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_  
 \_\_\_\_\_ gal. @ \$ \_\_\_\_\_ / gal. = \_\_\_\_\_

TOTAL MATERIAL COST - \$ \_\_\_\_\_

LABOR ESTIMATE	No. of Men _____	No. of Days _____	S.T. _____	O.T. _____
Travel Time			- _____ hr.	_____ hr.
Unload & Staging			- _____ hr.	_____ hr.
Inshop Rigging & Handling			- _____ hr.	_____ hr.
Blasting			- _____ hr.	_____ hr.
Cementing			- _____ hr.	_____ hr.
Lining - Straight Work			- _____ hr.	_____ hr.
Lining - Outlets			- _____ hr.	_____ hr.
Lining - Brackets, Baffles, etc.			- _____ hr.	_____ hr.
Curing			- _____ hr.	_____ hr.
Inspection			- _____ hr.	_____ hr.
Loading			- _____ hr.	_____ hr.
Miscellaneous			- _____ hr.	_____ hr.
TOTAL LABOR HOURS	_____	@ \$ _____	S.T. = _____	
TOTAL LABOR HOURS	_____	@ \$ _____	O.T. = _____	
TOTAL LABOR HOURS	_____	@ \$ _____	D.T. = _____	
Plus _____ % S & A			= \$ _____	
Subtotal Labor & S & A				\$ _____
ALL IN COST				\$ _____
PLUS _____ % PROFIT				\$ _____

**LODGING:** \_\_\_\_\_ men @ \$ \_\_\_\_\_ /man X \_\_\_\_\_ /nights \$ \_\_\_\_\_  
**LIVING EXPENSES:** \_\_\_\_\_ men @ \$ \_\_\_\_\_ /man X \_\_\_\_\_ /nights \$ \_\_\_\_\_

**MILEAGE:** 1-Ton Truck \_\_\_\_\_ miles @ \_\_\_\_\_ /mile \$ \_\_\_\_\_  
 Pick-Up Truck \_\_\_\_\_ miles @ \_\_\_\_\_ /mile \$ \_\_\_\_\_  
 Car \_\_\_\_\_ miles @ \_\_\_\_\_ /mile \$ \_\_\_\_\_

**TOTAL \$ \_\_\_\_\_**



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**MISC. EXPENSES:** (Rental, Etc.) \_\_\_\_\_ \$ \_\_\_\_\_

**FABRICATION**

Fabricator _____		Cost \$	_____
Mark Up _____ %			\$ _____
<b>TOTAL METAL COST</b>			<b>\$ _____</b>
Freight \$ _____ MU _____ =			\$ _____

**EXTERIOR COATING**

Blast _____ hrs. @ \$ _____ /hr.			\$ _____
Labor to Apply _____ hrs. @ \$ _____ / hr.			\$ _____
S & A _____ %			\$ _____
<b>SUBTOTAL</b>			<b>\$ _____</b>
MATERIAL _____ gal. @ \$ _____ /gal.			\$ _____
PROFIT _____ %			\$ _____
		<b>TOTAL COATINGS</b>	<b>\$ _____</b>
		<b>TOTAL JOB ESTIMATE</b>	<b>\$ _____</b>

**SUPPLIES**

Solvents

Insol III _____ gal. @ \$ _____ / gal. =			_____
M E K _____ gal. @ \$ _____ / gal. =			_____
Tolubene _____ gal. @ \$ _____ /gal. =			_____
		<b>Subtotal \$</b>	<b>_____</b>

**Application Supplies**

Grinding Stones _____ @ _____ =			_____
Grinding Discs _____ @ _____ =			_____
4" Brushes _____ @ _____ =			_____
2" Brushes _____ @ _____ =			_____
Roller Frames _____ @ _____ =			_____
Roller Covers _____ @ _____ =			_____

**Miscellaneous Supplies**

5-Gallon Cans _____ @ _____ =			_____
1-Gallon Cans _____ @ _____ =			_____
1-Quart Cans _____ @ _____ =			_____
Work Gloves _____ @ _____ =			_____
Rags/Bundles _____ @ _____ =			_____
Sand _____ @ _____ =			_____

**SUBTOTAL** \$ \_\_\_\_\_

**Exterior Coatings**

Primer Coat _____ gal. @ \$ _____ /gal.			\$ _____
Intermediate Coat _____ gal. @ \$ _____ /gal.			\$ _____
Top Coat _____ gal. @ \$ _____ /gal.			\$ _____

**SUBTOTAL** \$ \_\_\_\_\_

**TOTAL SUPPLIES** \$ \_\_\_\_\_

<b>TO CONVERT</b>	<b>FROM</b>	<b>TO</b>	<b>MULTIPLY BY</b>
Area	Square Feet (ft. <sup>2</sup> )	Square Meters (m <sup>2</sup> )	0.0929
	m <sup>2</sup>	ft <sup>2</sup>	10.764
Volume	Imperial Gallons	Liter	4.55
	Imperial Gallons	U.S. Gallons	1.20
	Liter	Imperial Gallons	0.22
	Liter	U.S. Gallons	0.264
	U.S. Gallons	Imperial Gallons	0.833
	U.S. Gallons	Liters	3.785
Area/Volume	ft <sup>3</sup> /Imp. Gallon	m <sup>3</sup> /Liter	0.0204
	ft <sup>3</sup> /U.S. Gallon	m <sup>3</sup> /Imp. Gallon	0.112
	ft <sup>3</sup> /U.S. Gallon	m <sup>3</sup> /Liter	0.0245
	m <sup>3</sup> /Imp. Gallon	m <sup>3</sup> /Liter	0.2197
	m <sup>3</sup> /Imp. Gallon	ft <sup>3</sup> /U.S. Gallon	8.97
	m <sup>3</sup> /Liter	ft <sup>3</sup> /Imp. Gallon	48.93
	m <sup>3</sup> /Liter	ft <sup>3</sup> /U.S. Gallon	40.76
Length	centimeters	inches	0.394
	centimeters	feet	0.0328
	feet	centimeters	30.48
	feet	meters	0.3048
	inches	centimeters	2.54
	meters	feet	3.2808
	microns	mils	0.04
	mils	microns	25.0
	Weight	kilograms	pounds
pounds		kilogram	0.4536
Pressure	kilograms/ square centimeter	pounds/ square inch	14.22
	pounds/square inch	kilograms/ square centimeter	0.0703
<b>TO CONVERT</b>	<b>FROM</b>	<b>TO</b>	<b>CALCULATE</b>
Temperature	Celsius	Fahrenheit	9/5 (C°) + 32
	Fahrenheit	Celsius	5/9 (F°-32)
Film thickness	wet	dry	wet film thickness x percent solids by volume/100
	dry	wet	dry film thickness x 100/percent solids by volume

**Lining Areas of Tanks, Cars and Storage Tanks with Dished Heads**

<b>TANK DIA.</b>	<b>TOTAL AREA OF BOTH DISHED ENDS</b>	<b>AREA OF SHELL OR STRAIGHT PART OF TANK PER INCH OF LENGTH</b>	<b>TANK DIA.</b>	<b>TOTAL AREA OF BOTH DISHED ENDS</b>	<b>AREA OF SHELL OR STRAIGHT PART OF TANK PER INCH OF LENGTH</b>
<b>IN.</b>	<b>SQ. FT.</b>	<b>SQ. FT.</b>	<b>IN.</b>	<b>SQ. FT.</b>	<b>SQ. FT.</b>
24	8.84	.524	67	58.35	1.462
25	9.49	.545	68	59.99	1.484
26	10.16	.567	69	61.66	1.505
27	10.88	.589	70	63.35	1.527
28	11.61	.611	71	65.12	1.549
29	12.38	.633	72	66.86	1.571
30	13.14	.655	73	68.67	1.593
31	13.93	.676	74	70.46	1.614
32	14.75	.698	75	72.33	1.636
33	15.61	.720	76	74.15	1.658
34	16.50	.742	77	76.06	1.680
35	17.41	.764	78	77.95	1.702
36	18.28	.785	79	79.89	1.724
37	19.25	.807	80	81.82	1.745
38	20.20	.829	81	83.77	1.767
39	21.20	.851	82	85.80	1.789
40	22.19	.873	83	87.78	1.811
41	23.22	.894	84	89.87	1.833
42	24.31	.916	85	91.92	1.854
43	25.37	.938	86	93.97	1.876
44	26.46	.960	87	96.11	1.898
45	27.61	.982	88	98.22	1.920
46	28.75	1.004	89	100.43	1.942
47	29.94	1.025	90	102.57	1.963
48	31.13	1.047	91	104.75	1.985
49	32.32	1.069	92	107.02	2.007
50	33.60	1.091	93	109.24	2.029
51	34.85	1.112	94	111.48	2.051
52	36.16	1.134	95	113.82	2.073
53	37.47	1.156	96	116.12	2.094
54	38.77	1.178	97	118.51	2.116
55	40.18	1.200	98	120.84	2.138
56	41.55	1.221	99	123.20	2.160
57	42.97	1.244	100	125.58	2.182
58	44.40	1.265	101	128.06	2.203
59	45.83	1.287	102	130.58	2.225
60	47.34	1.309	103	133.03	2.247
61	48.82	1.331	104	135.59	2.269
62	50.37	1.353	105	138.08	2.291
63	51.90	1.374	106	140.60	2.313
64	53.45	1.396	107	143.24	2.334
65	55.07	1.418	108	145.88	2.355
66	56.88	1.440	120	176.13	2.619
			126	196.80	2.750