



Electro Mechanical Works LLC

Pre-Insulated

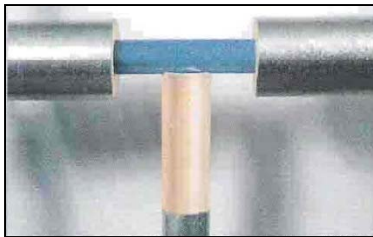
Phenolic Foam Pipe Section

Phenolic Foam Pre-insulated – Pipe Section:

'**AWE GOOT**' Phenolic Foam Pre-insulated pipe section, is a new type of thermal insulation material produced by moulding or cutting. It features excellent heat preservation properties, ease of construct and neat, trim appearance.

It is widely used in the thermal insulation of cold and hot water pipes, petroleum and chemical engineering ducts, and is an extremely effective viable alternative for, rubber-foam, fiberglass and polyurethane foam.

Unfinished T-Section



Finished T-Section



Unfinished 90° pipe



Finished 90° pipe



Phenolic Foam Pre-insulated – Pipe Section:

Features and Properties:

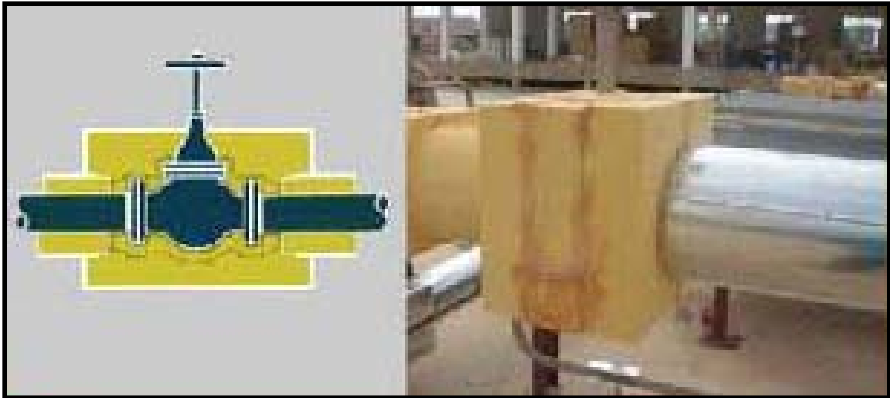
'**AWE GOOT**' Phenolic Foam is the core material of insulation pipe which is foamed by using an exclusive recipe, it is non-combustible, infusible, unshrinkable, non-deforming, even at temperatures of 2000°C, produces no smoke or harmful gasses when exposed to fire, and enjoys a fire test classification of Class 0. When introduced into a Cooling / Freezing environment the insulation material remains unbreakable below -196°C.

Environmentally *Friendly*

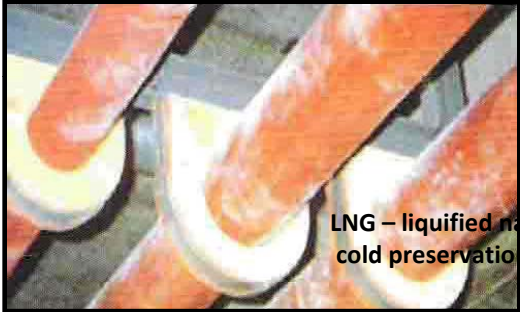
Latest technology methods ensure Phenolic Foam insulation pipe will not cause corrosion on metal pipes or tubes, and importantly is CFC and HCFC free and meets environmental protection requirements.



Phenolic Foam - Flange Pipework:



Phenolic Foam Pipe Supports:

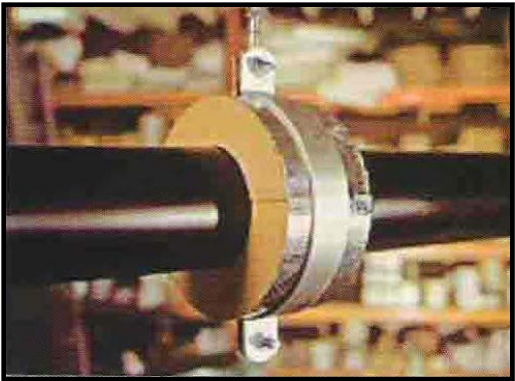


LNG – liquified natural gas receiving station cold preservation pipe support.

Air conditioner heat insulation pipe support.



Finished pipe support.



Pipe support inserts.



HIGH DENSITY PHENOLIC FOAM PERFORMANCE (PIPE SUPPORT)

PHENOLIC FOAM	UNIT	SPECIFICATIONS				
DENSITY	Kg/m ³	150	200	250	300	350
THERMAL CONDUCTIVITY	W/mk	0.031	0.033	0.035	0.038	0.040
COMPRESSING STRENGTH	Mpa	=1.8	=2.5	=3.5	=6.0	=8.0
COMBUSTIBILITY	-	Non-Combustible Class A	Non-Combustible Class A	Non-Combustible Class A	Non-Combustible Class A	Non-Combustible Class A
WATER ABSORPTION	(V/V) %	2	2	2	2	2

- **Premium performance rigid phenolic – thermal conductivity 0.020 W/m.K.**
- **Available Densities of 60, 80, 120, 160, 180 and 200 kg/m³.**
- **Cover pipework operating temperature range of – 190°C to +130°C.**
- **CFC/HCFC – free with zero Ozone Depletion Potential (ODP).**



Phenolic Foam Pre-insulated – Industrial Pipe Insulation:



LNG Terminals



COLD INSULATION THICKNESS GUIDE

Diameter	Duct Outer Diameter (mm)	INSULATED TEMPERATURE OF CONVEYING MEDIA (C°)												
		10	0	-10	-20	-30	-40	-60	-80	-100	-120	-140	-160	-190
15	22	20	25	30	35	40	45	50	60	65	70	75	80	85
20	28	25	30	35	40	45	45	55	60	70	75	80	85	90
25	32	25	30	35	40	45	50	60	65	75	80	85	90	95
32	38	25	30	35	40	45	50	60	70	75	80	85	90	100
40	45	25	35	35	45	50	55	65	70	80	85	90	95	100
50	57	25	35	40	45	50	55	65	75	80	90	95	100	110
65	73	30	35	40	50	55	60	70	80	85	95	100	105	115
80	89	30	35	40	50	55	60	70	80	90	100	105	110	120
100	108	30	40	45	50	55	65	75	85	95	105	110	115	125
125	133	30	40	45	55	60	65	80	90	100	110	115	120	130
150	159	30	40	45	55	60	70	80	90	100	115	120	125	135
200	219	30	40	45	60	65	70	85	95	110	115	125	135	145
250	273	30	45	50	60	65	75	90	100	110	120	130	140	150
300	325	30	45	50	60	65	75	90	105	115	130	135	145	155
350	377	35	45	50	60	70	75	90	105	120	130	140	145	160



HEAT INSULATION THICKNESS GUIDE

No	DN / mm Duct Diameter	Duct Outer Diameter (mm)	Pipe Section Inner Diameter (mm)	Pipe Section Thickness (mm)		
				50°	80°	130°
1	15	18/22	22	20	25	45
2	20	25/27	28	25	30	45
3	25	32/34	35	25	30	50
4	32	38/42	43	25	30	50
5	40	45/48	49	25	35	55
6	50	57/60	61	25	35	55
7	65	76	77	30	35	60
8	80	89	90	30	35	60
9	100	108/114	116	30	40	65
10	125	133/140	142	30	40	65
11	150	159/168	170	30	40	70
12	200	219	220	30	40	70
13	250	273	275	30	45	75
14	300	325	328	35	45	75
15	350	377	380	35	45	75
16	400	426	430	35	50	80
17	450	480	485	40	60	85
18	500	530	535	40	60	90
19	Jar Body / equipment	n/a	n/a	50	70	100



Numerical Control Vertical / Horizontal Cutting Machine

Specification:

- Max Foam Length - 4050mm.
- Max Foam Width - 1300mm.
- Max Foam Height - 1200mm.
- Max Cutting Speed - 3.0m / min.
- Cutting Tolerance - 1.0mm.
- Machine Length - 8800mm.
- Machine Width - 2450cm.
- Machine Height - 3300mm.
- Wire Length - 6900mm.
- Power - 380v – 7.0KW.



Cutting Wire

Production Line Machine for Pre-insulated Composite Panel

Specification:

- Max Width of Panel - 1200mm.
- **Max Thickness of Panel - 15-200mm.**
- Max Length of Panel - As required.
- Production Speed - 2 – 5m / min.
- **Machine Total Length - 5000cm.**
- Total Power - 75KW.

Control Method

Controlled by computer and 24 hour continual production.

Scope of Application

Producing Phenolic Foam (PF) Aluminium Foil Composite Panel, PF **Coloured**
Steel / Zinc-coated Steel Composite Panel and other non-metal Composite Panels.



Computer Controlled Vertical / Horizontal Cutting Machine

Specification:

- Max Foam Length - 2100mm.
- Max Foam Width - 1300mm.
- Max Foam Height - 1200mm.
- Max Cutting Speed - 2.0m / min.
- Cutting Tolerance - 1.0mm.
- Machine Length - 3800mm.
- Machine Width - 2450cm.
- Machine Height - 3300mm.
- Wire Length - 6900mm.
- Power - 380v – 7.5KW.





Electro Mechanical Works LLC

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