



Material Properties

MATERIALS :	DENSITY :	HEAT :	MELTING POINT :
	(g/cm ³)	(cal/g °C)	(°C)
Water	1	1	
Oil	0,8	0,4	
Stainless Steel (304)	7,91	0,12	1398
Stainless Steel (430)	7,61	0,11	1454
Aluminum	2,7	0,24	658
Iron	7,88	0,12	1400
Molybdenum	10,21	0,071	2621
Nickel 200	8,88	0,12	1435
NiCr 80/20	8,35	0,11	1398
Silver	10,49	0,057	960
Brass-Yellow	8,47	0,096	932
Gold	19,32	0,032	1062
Platinum	21,45	0,035	1773
Copper	8,9	0,095	1082
Carbon	2,21	0,28	3704
Lead	11,34	0,032	



Maximum Power Density

MATERIALS:	WORKING RATING:	MAXIMUM DENSITY:
	(°C)	(W/cm ²)
Stagnant Water	100	10
Moving Water	100	20
Weather (Stagnant)		6
Fatty Acids	70	3
Salt Bath	450	4
Caustic Soda 2%	98	6
Caustic Soda 10%	98	4
Caustic Soda 75%	82	4
Lead Bath	500	4
Phosphate Bath	90	4
Amonyok Bath	100	3,5
Phenols	240	2,3
Of Acidic Solution	80	6
In Alkaline Solution	100	6
Sulfur (liquid)	315	1,5
Trichlorethylene	65	3
Glycerine	150	2
Gasoline	150	3,5
Asphalt	150	1,25
Paraffin	65	2,5

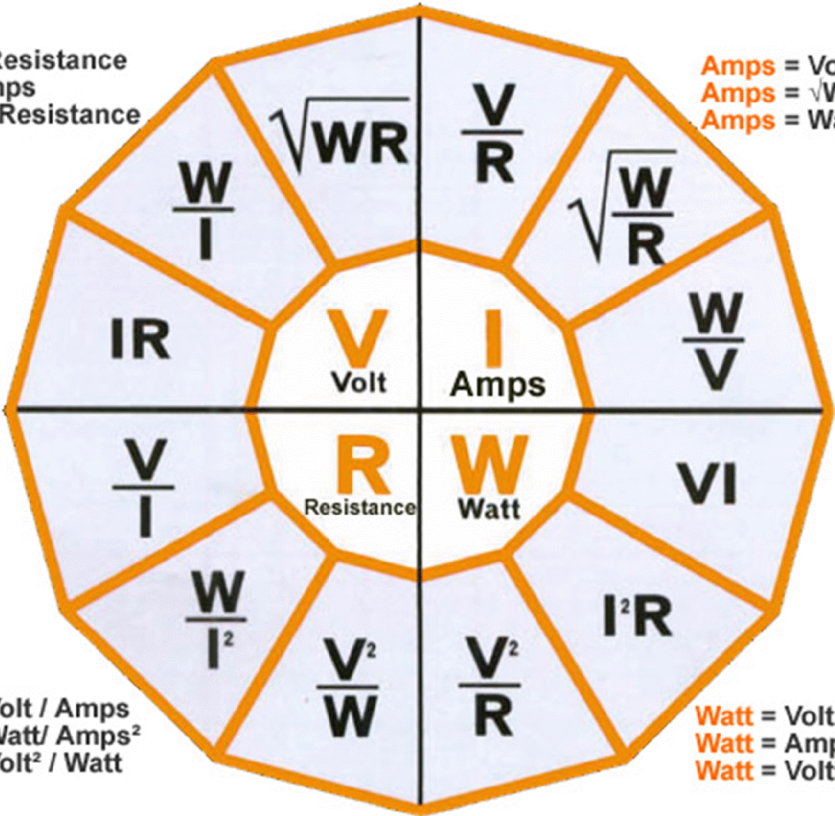


Liquid Metal in the presence	260	12,4
"	370	11
"	450	8
"	600	5,5
"	700	4
Machine Oil	120	2,3
Vegetable Oil	200	4,5
Mineral Oil	200	2,5
Light Oil	50	3,5
"	100	2,5
"	240	2
"	350	1,5
Bay Oil	300	0,8-1,2
On Oil Bath	200	2,5
Circulation and Oil Bath	300	2

Formula

Volt = $\sqrt{\text{Watt} \times \text{Resistance}}$
Volt = Watt / Amps
Volt = Amper x Resistance

Amps = Volt / Resistance
Amps = $\sqrt{\text{Watt} / \text{Resistance}}$
Amps = Watt / Volt



Resistance = Volt / Amps
Resistance = Watt/ Amps²
Resistance = Volt² / Watt

Watt = Volt x Amps
Watt = Amps² x Resistance
Watt = Volt² / Resistance



20 x 0,122 x 250

Watt = _____

0,8604 x 2

*The eyes of potential heat loss when calculating the required power should be in front.

Accordingly;

%30-60 is not isolated to the bathroom

%20-40 To isolate the bath

%30-40 is not isolated to a small mass

%15-30 has been isolated to a small mass

%35-60 is not isolated to a small mass

%25-40 For the great mass of isolated

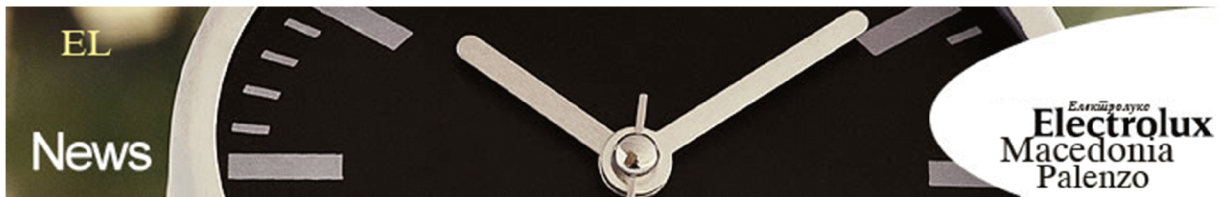
power should be added to.

Recommendations:

*To lighten the load resistance of the surface as possible resistance should be used in most.

*A very fine and smooth of Resistance to attach the slot have.

*Resistance as possible to the hole should be sitting tight.



*Resistance to extend the life necessarily appropriate heat

need to check.

*End user as possible feel Thermocouple

resistance should be placed close to.

*Cable output physical damage, excessive heat from the
from moisture, excessive stress being so. is necessary to protect.

*Resistance to sit a good, easy-to-be and the better off
gel in terms of heat transfer assembly is recommended to use.