



HOT PIPE COATING™

FURTHER INFORMATION

DIFFERENCE BETWEEN HOT PIPE COATING & WRAP INSULATION

The big difference between what we do with the coating and what a wrap insulation covered with a metal jacket, is very different in real reduction in heat. When a hot pipe is wrapped with fiberglass (75 mm), and you would touch the exterior side, you do not feel much heat and make you think it is working well. When the same hot pipe is coated with 3mm HPC, and you touch the exterior, you feel more heat than you felt on the exterior of the fiberglass. The assumption is that the fiberglass is working better.

However:

1. With the first hot pipe, wrapped with the fiberglass, you are touching on a distance of 75mm from the hot surface of the pipe. A wrap insulation absorbs heat, then transfers this heat through it (this is called heat transfer which is measured by R values). This means that the insulation cannot, and does not, hold the heat inside the pipe. It is designed to absorb the heat which is then passed through it at a slow rate. The metal jacket is a shield away from the wrap so that the air gap between the wrap and the metal jacket allows most of the heat to escape without heating up the metal jacket. When someone touches the metal jacket, they do not feel the heat and they think the wrap is insulating. This is totally wrong because the heat has already escaped and released into the atmosphere and this is why the metal jacket is not hot. This gives the illusion that it is insulating and holding the heat in the pipe.
2. With the HPC, you are touching at only 3mm from the hot pipe. HPC is a coating. It is the only material between the pipe surface and your touch. There is no air pocket, no metal jacket to hinder or obscure the amount of heat you are feeling being lost. Therefore, what you feel is the actual heat coming to the surface. The ceramic blend was formed to block the heat transfer. The heat inside the pipe can actually increase in temperature after we have coated it with HPC the rate of heat loss is not comparable to that of the wraps. If we tested HPC effectiveness at 75mm from the hot surface, the result would be much cooler than recorded with the fiberglass. Meaning the fiberglass has a cushion of air and fibres between the hot surface and the top where you are checking the temperature. In this air cushion, the



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actual heat is being dissipated rapidly into the atmosphere, and only a small amount of heat loads into the fibres to be recorded on the top side of the fiberglass wrap or metal jacket.

Alternatively, if you could flatten the fiberglass down and force it against the hot surface, you would feel a tremendous amount of heat. This means the actual material itself is not insulating. The air space between the hot surface and the top of the wrap material is allowing the heat to dissipate into the atmosphere before you feel or record it. When heat loss or gain is recorded in labs, the sides of the material are not encased or sealed to catch the actual heat being thrown out and lost to the sides of the wrap into the atmosphere. Only the top is checked for how much heat is appearing on the surface.

Therefore, if you check our material also at 75mm away from the surface of the hot pipe, you will not feel any heat. Given the air space, you can hide the inefficiency of any insulation material.

What you find is that our HPC is directly against the hot surface and you can feel it work and gauge its effectiveness. So, if you need to reduce the surface temperature only, so employees will not be burned, sometimes fiberglass is good. But, these days, if you need to insulate and contain the heat and prevent heat loss to save energy, then you should use HPC.

Furthermore:

3. Also, HPC can be sprayed to fit all forms of the pipe, from elbows to valves. Wraps cannot conform to these. HPC covers all areas which gives a total insulation of the pipe, not just the straight lengths.
4. Wrap insulations ALWAYS loads with moisture and this is known by all engineers that it will allow corrosion under the insulation because it allows moisture to load into the wrap to cause this corrosion. If moisture is loaded into the wrap, then the wrap insulation cannot insulate. Moisture kills its ability to insulate. This corrosion under the insulation is known in the industry. HPC does not allow moisture into it when coated with ENDUROOF. Then it can withstand weathering of all kinds.



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5. If there is ever a problem with a pipe that is covered with wrap and jacketing, all the insulation must be removed to find the problem and then all reapplied new. Very costly. HPC is a coating. If a problem develops on the pipe, it can be easily seen because there is no metal jacket hiding the problem. The coating can be removed in the problem area, the problem is fixed and coating reapplied only in this small area. The pipe will be back in operation the same day making the HPC solution very efficient, much less costly to repair and very quick to get equipment back into operation.

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