Equipment Heatshields

MTE

Mech-Tool Engineering Ltd

For over 50 years, Mech-Tool Engineering Ltd (MTE) has been the global leader in radiant heat shielding systems for offshore and onshore markets.

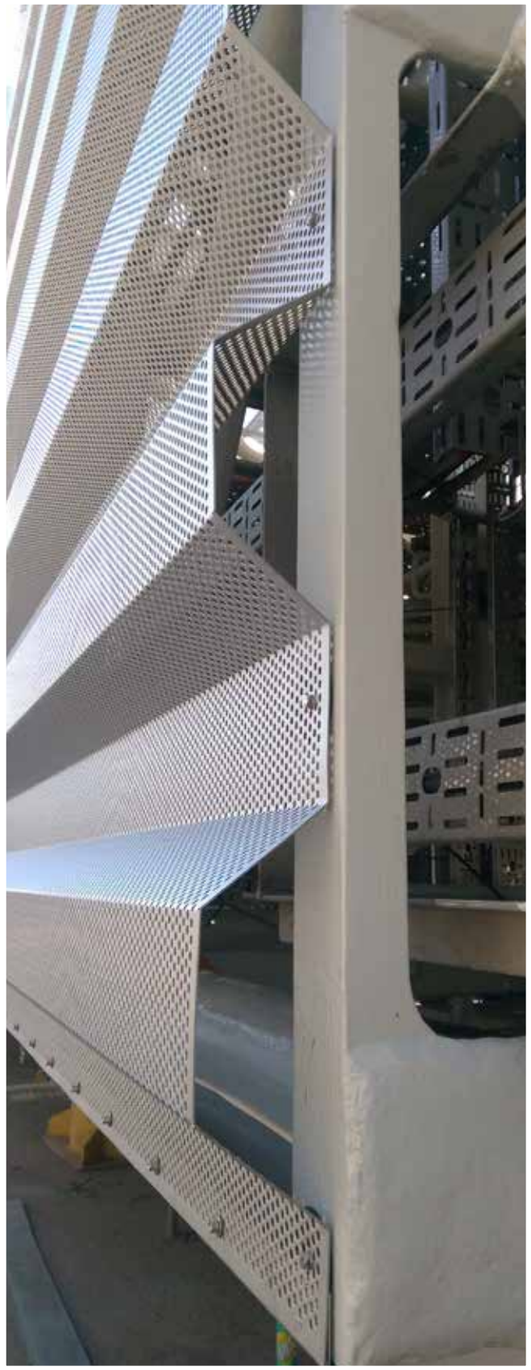
MTE Equipment Heatshields are independently type approved by Lloyd's Register following witnessed testing and further testing at the BRE Global Testing Facility in Watford, UK. These tests assessed:

- Heat flux reduction
- Noise generation
- Wind speed reduction

Proven Engineering. Certified Performance.

Constructed from perforated or solid stainless-steel plate, our equipment heatshields are strong, corrosion resistant, lightweight, and naturally ventilated.

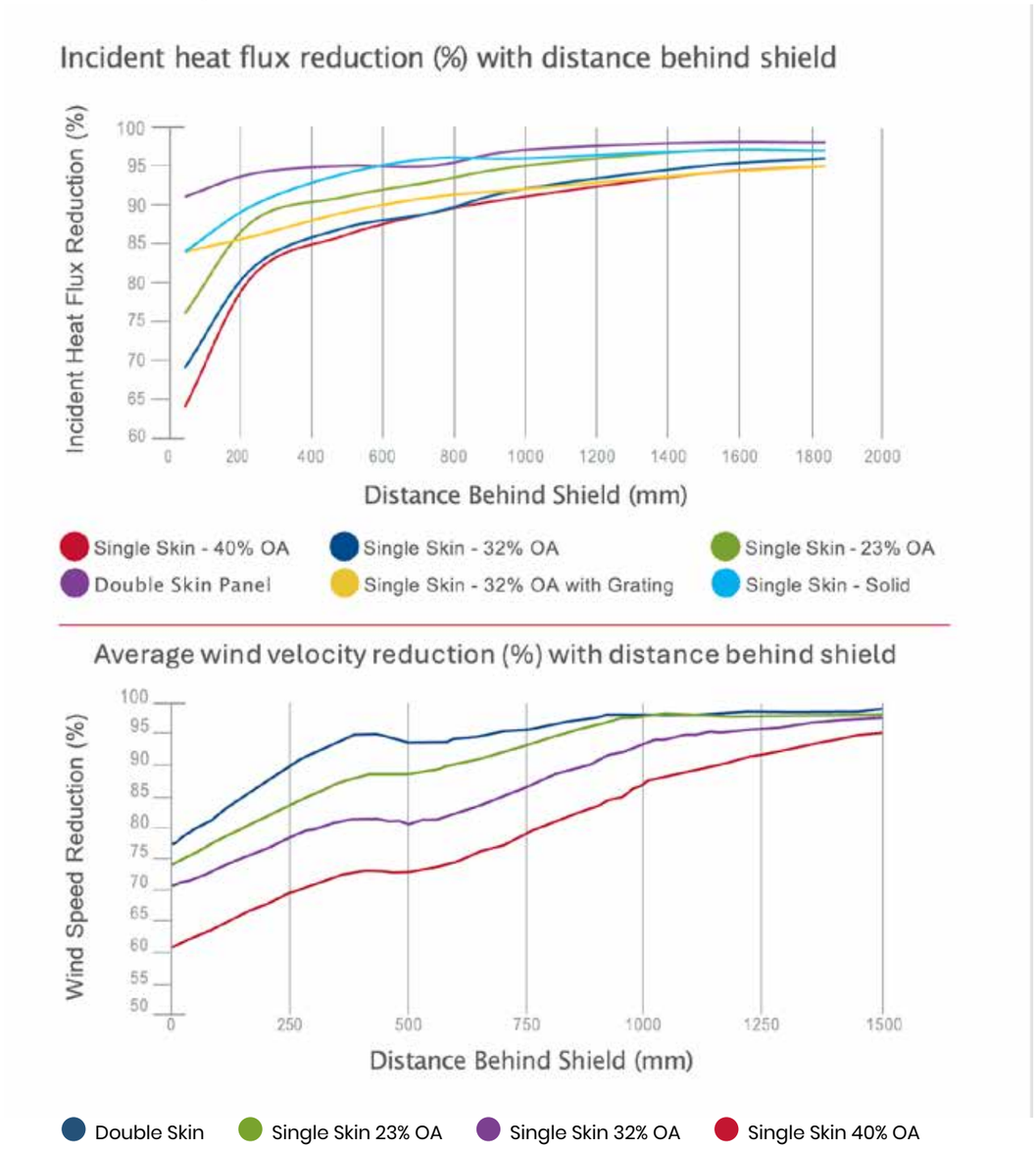
MTE heat shield historical testing provides the base data from which our equipment heat shield performance data is derived to support our design and structural calculations, validating heat flux and temperature reduction for given incident heat flux conditions, shield-to-object separation, and overall design integrity under known environmental conditions.



Equipment Heat Shields Performance Criteria

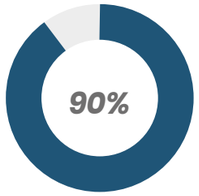
Expertise You Can Rely On

With more than five decades of design experience, our engineering team combines advanced computer-based tools with proven practical knowledge to solve the most complex thermal, mechanical, and structural challenges.

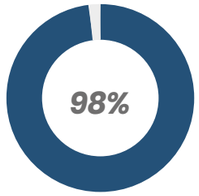


Performance

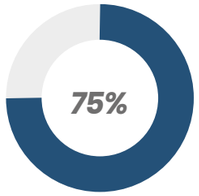
MTE's proven ventilated heat shield system can achieve:



Immediate reduction to incident heat flux in excess of 90%



Further improved and verified performance as distance behind the shield is considered. (Heat Flux Reduction & Wind Velocity Reductions up to 98%)



Immediate reduction to incident wind velocity in excess of 75%.

Maximum pressure on single skin perforated heat shield mbar

Panel Span	40% Open Area Primary Skin			32% Open Area Primary Skin			23% Open Area Primary Skin		
mm	1.5 thk	2.0 thk	2.5 thk	1.5 thk	2.0 thk	2.5 thk	1.5 thk	2.0 thk	2.5 thk
500	830	1106	1383	1026	1367	1709	1319	1759	2198
1000	207	277	346	256	342	427	330	440	549
1500	92	123	154	114	152	190	147	195	244
2000	52	69	86	64	85	107	82	110	137
2500	33	44	55	41	55	68	53	70	88
3000	23	31	38	28	38	47	37	49	61
3500	17	23	28	21	28	35	27	36	45
4000	13	17	22	16	21	27	21	27	34
4500	10	14	17	13	17	21	16	22	27
5000	8	10	13	10	13	16	13	17	21

Maximum pressure on double skin perforated heat shield mbar

Panel Span	32% Open Area Primary Skin		
mm	1.5 thk	2.0 thk	2.5 thk
500	975	1278	1593
1000	244	319	398
1500	108	142	177
2000	61	80	100
2500	39	51	64
3000	27	35	44
3500	20	26	33
4000	15	20	25
4500	12	16	20
5000	10	13	16

Typical Applications

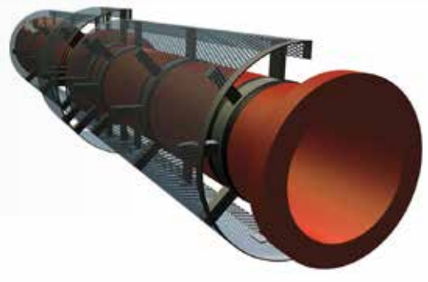
- Control Consoles – Protection of instrumentation and monitoring stations
- Piping – Heat protection for gases, liquids, and structural piping
- Cable Trays – Shields electrical systems from radiant heat
- Sunshade Systems – Protection from solar and environmental extremes
- Telecoms Equipment
- Lighting & Warning Beacons, Speaker Junction Boxes, Wi-Fi senders, etc

Control Console Protection

MTE Equipment Heatshields protect heat-sensitive instrumentation, valve systems, and monitoring stations across offshore platforms, vessels, and onshore petrochemical and process facilities.

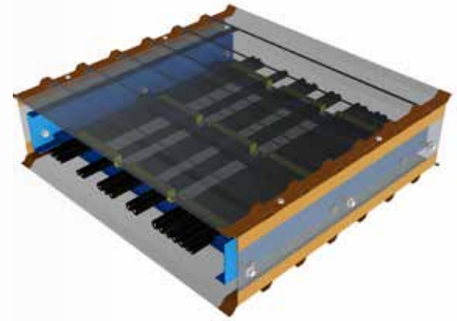
Piping Protection

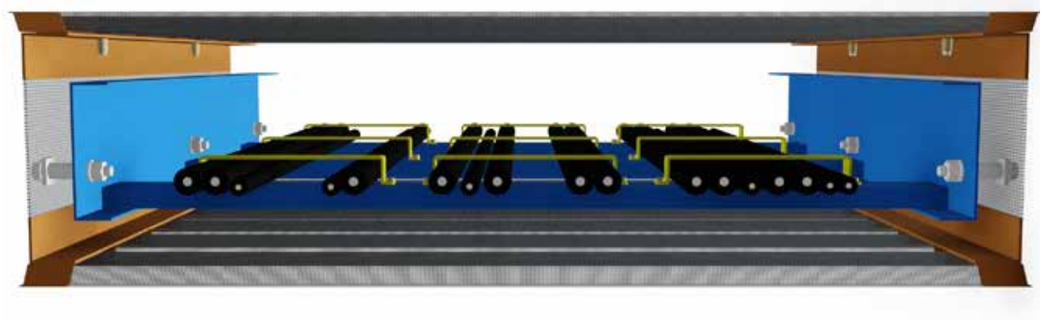
MTE Heatshields reduce heat impact on sensitive pipeline contents — such as gases or liquids — while protecting structural piping in heat-critical areas, including those directly beneath flare platforms.



Cable Tray Protection

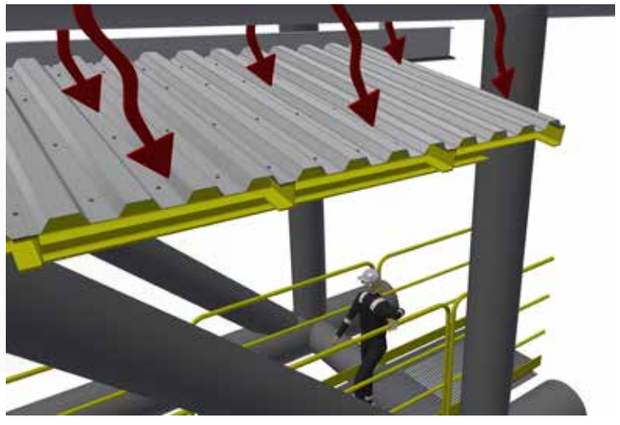
MTE Equipment Heatshields protect sensitive cable systems from solar and radiant heat, helping maintain the operational efficiency of electrical infrastructure.





Solar Sun Shading

Protection from solar and environmental extremes,



Equipment Heatshield Specifications

- **Materials:** Stainless steel grade 316L
- **Material thickness:** 1.5 mm as standard
- **Isolation gaskets:** Supplied for thermal break between support steelwork and stainless steel angles
- **Attachment:** Simple bolted connections with stainless steel set screws, grade A4 (with gaskets and washers)
- **Identification:** Each panel individually marked for ease of installation

Testing and Certification

50+ years knowledge and expertise as the global leader in the design and build of high performance Heat and Solar Radiation Shielding Systems

- Independently Tested
- Witnessed by Lloyds Register
- Independent Verification of Performance (Lloyds Register – Design Appraisal Document)

Heat Flux Reduction

Wind Velocity Reduction

No Noise Generation

Benefits of MTE Equipment Heat Shield System

The global leader in radiant heat shielding systems for over 50 years

The MTE Advantage

- ✓ **Proven Performance – Designed to meet your enviromental requirements**
- ✓ **Custom-Built Solutions – Tailored to your project needs**
- ✓ **Trusted Globally – Installed in major energy and industrial facilities worldwide**
- ✓ **Efficient Installation – No specialist tools required**

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