



## ***Certificate No: IFCC1126***

This certificate certifies that the products below manufactured by

### **J. F. AMONN SPA**

**Via Altmann 12  
I – 39100 BOLZANO**

who produce the following products

#### ***Protherm Steel***

Satisfies the requirements of **IFCC scheme SDP12** for Surface Spread of flame & intumescent steel protection. This includes the testing of products to **ENV 13381-4: 2002**, the inspection of the Factory Production Control and continuing surveillance audits to System 1 and testing of samples of products taken from production. This product can only be used within the **Estonian** market. The product specification and thickness for various steel sections to achieve from **30 minutes to 90 minutes** fire resistance are detailed in the following Fire Resistance Classification Report:- PKO-14-034/AO 204.

The certificate remains valid subject to satisfactory annual surveillance of factory production control by IFC Certification. The reader should contact IFC Certification or refer to [www.ifccertification.com](http://www.ifccertification.com) to validate its status.



First Issued: 02 March 2015

Revised: 26 April 2017

Valid to: 01 March 2020

Issue No: 5

A handwritten signature in black ink, which appears to read 'Ian Woodhouse'.

**Ian Woodhouse**  
Director of Certification

## Certificate No: IFCC1126

Tel: +44 (0)1844 275500 Fax: +44 (0)1844 274002 E-mail: [info@ifccertification.com](mailto:info@ifccertification.com) Web: [www.ifccertification.com](http://www.ifccertification.com)  
Registered No: 4777898 England

<b>Producer:</b>	<b>J F AMONN SPA (formerly Amonn Fire s.r.l)</b>			
<b>Protective Material:</b>	<b>Protherm Steel</b>			
<b>Open steel profiles – 'I' and 'H' profiles</b>				
<b>ENV13381-4 Fire Resistance Classification R-30</b>				
Temperature	450	500	550	620
Section Factor $A_{pr} / V [m^{-1}]$	Thickness of fire protection material to maintain temperature below design temperature [ $\mu m$ ]			
50	182	153	126	100
60	195	164	138	107
70	209	176	148	115
80	224	188	158	123
90	241	202	170	132
100	258	217	182	142
110	277	232	195	152
120	297	249	209	163
130	318	267	225	175
140	341	287	241	187
150	366	308	258	201
160	393	330	277	216
170	421	354	297	231
180	452	380	319	248
190	485	407	342	266
200	520	437	367	285
210	557	468	393	306
220	598	502	422	328
230	641	539	452	352
240	288	578	486	377
250	738	619	520	405
260	791	664	558	434
270	848	713	598	466
280	910	764	642	499
290	976	820	688	536
300	1047	879	738	574
310	1111	930	773	622
320	1188	995	823	660
330	1272	1072	880	704
340	1360	1145	935	746
350	1466	1215	995	790
360	1580	1292	1060	843
370	1707	1378	1133	898
380	1818	1462	1204	948
390	1948	1560	1278	1001
400	2070	1662	1363	1060

## Certificate No: IFCC1126

<b>Producer:</b>	<b>J F AMONN SPA (formerly Amonn Fire s.r.l)</b>			
<b>Protective Material:</b>	<b>Protherm Steel</b>			
<b>Open steel profiles – 'I' and 'H' profiles</b>				
<b>ENV13381-4 Fire Resistance Classification R-60</b>				
Temperature	450	500	550	620
Section Factor $A_{pr} / V [m^{-1}]$	Thickness of fire protection material to maintain temperature below design temperature [ $\mu m$ ]			
50	447	381	325	262
60	480	408	349	281
70	514	438	374	302
80	552	469	401	324
90	592	503	430	347
100	635	540	461	372
110	681	579	495	399
120	730	621	531	428
130	783	666	569	459
140	840	714	610	493
150	901	766	655	528
160	966	822	702	567
170	1036	881	753	608
180	1111	945	808	652
190	1192	1014	866	699
200	1278	1087	929	750
210	1371	1166	996	804
220	1470	1251	1069	862
230	1577	1341	1146	925
240	1691	1439	1229	992
250	1814	1543	1318	1064
260	1945	1655	1414	1141
270	2086	1775	1516	1224
280	2237	1904	1626	1312
290	2400	2042	1744	1408
300	-	2190	1871	1510
310	-	2425	2043	1618
320	-	-	2225	1727
330	-	-	2415	1840
340	-	-	-	1980
350	-	-	-	2090
360	-	-	-	2215
370	-	-	-	2365
380	-	-	-	-
390	-	-	-	-
400	-	-	-	-

## ***Certificate No: IFCC1126***

<b>Producer:</b>	<b>J F AMONN SPA (formerly Amonn Fire s.r.l)</b>			
<b>Protective Material:</b>	<b>Protherm Steel</b>			
<b>Open steel profiles– 'I' and 'H' profiles</b>				
<b>ENV13381-4 Fire Resistance Classification R-90</b>				
Temperature	450	500	550	620
Section Factor $A_{pr} / V$ [m <sup>-1</sup> ]	Thickness of fire protection material to maintain temperature below design temperature [μm]			
50	744	636	548	447
60	798	683	588	479
70	856	732	630	514
80	918	785	676	551
90	984	842	725	591
100	1056	903	777	634
110	1132	969	834	680
120	1214	1039	894	729
130	1302	1114	959	782
140	1397	1195	1029	839
150	1498	1282	1103	900
160	1607	1374	1183	965
170	1723	1474	1269	1035
180	1848	1581	1361	1110
190	1982	1696	1460	1191
200	2126	1819	1566	1277
210	2280	1951	1679	1370
220	2445	2092	1801	1469
230	-	2244	1931	1575
240	-	2406	2071	1690
250	-	-	2222	1812
260	-	-	2383	1944
270	-	-	2555	2085
280	-	-	-	2236
290	-	-	-	2398
300	-	-	-	-
310	-	-	-	-
320	-	-	-	-
330	-	-	-	-
340	-	-	-	-
350	-	-	-	-
360	-	-	-	-
370	-	-	-	-
380	-	-	-	-
390	-	-	-	-
400	-	-	-	-

## Certificate No: IFCC1126

<b>Producer:</b>	<b>J F AMONN SPA (formerly Amonn Fire s.r.l)</b>			
<b>Protective Material:</b>	<b>Protherm Steel</b>			
<b>Closed profiles – right-angled and round</b>				
<b>ENV13381-4 Fire Resistance Classification R-30</b>				
Temperature	450	500	550	620
Section Factor $A_{pr} / V [m^{-1}]$	Thickness of fire protection material to maintain temperature below design temperature [µm]			
50	191	157	135	105
60	208	175	146	113
70	227	188	158	123
80	246	200	171	133
90	266	218	185	144
100	287	235	200	156
110	314	256	217	169
120	340	277	234	182
130	370	302	254	197
140	400	327	275	214
150	464	359	297	231
160	467	390	321	250
170	507	423	348	271
180	546	455	376	293
190	589	492	407	316
200	632	528	440	342
210	685	573	476	370
220	737	617	514	400
230	795	676	556	433
240	852	715	601	468
250	919	770	650	506
260	986	825	697	543
270	1061	884	748	582
280	1135	942	802	624
290	1224	1009	860	669
300	1312	1075	923	718
310	1407	1163	991	777
320	1502	1244	1058	836
330	1614	1340	1129	894
340	1727	1431	1200	952
350	1842	1519	1279	1014
360	1952	1615	1358	1075
370	2098	1723	1449	1140
380	2240	1828	1540	1205
390	2370	1950	1634	1279
400	-	2078	1727	1352

<b>Producer:</b>	<b>J F AMONN SPA (formerly Amonn Fire s.r.l)</b>
<b>Protective Material:</b>	<b>Protherm Steel</b>

## Certificate No: IFCC1126

Closed profiles – right-angled and round				
ENV13381-4 Fire Resistance Classification R-60				
Temperature	450	500	550	620
Section Factor $A_{pr} / V [m^{-1}]$	Thickness of fire protection material to maintain temperature below design temperature [ $\mu m$ ]			
50	470	400	341	275
60	507	440	370	298
70	554	477	400	323
80	600	514	433	350
90	651	555	469	378
100	702	595	507	409
110	763	652	549	443
120	823	709	594	480
130	895	773	643	519
140	966	836	696	562
150	1048	902	753	608
160	1129	968	814	657
170	1218	1044	881	711
180	1307	1120	953	769
190	1422	1214	1031	832
200	1537	1308	1115	900
210	1666	1410	1206	973
220	1795	1512	1304	1052
230	1948	1634	1410	1138
240	2100	1755	1524	1230
250	2263	1929	1648	1330
260	2425	2103	1767	1426
270	-	2303	1896	1530
280	-	2502	2033	1640
290	-	-	2180	1759
300	-	-	2338	1887
310	-	-	-	2048
320	-	-	-	2208
330	-	-	-	2365
340	-	-	-	-
350	-	-	-	-
360	-	-	-	-
370	-	-	-	-
380	-	-	-	-
390	-	-	-	-
400	-	-	-	-

## Certificate No: IFCC1126

<b>Producer:</b>	<b>J F AMONN SPA (formerly Amonn Fire s.r.l)</b>			
<b>Protective Material:</b>	<b>Protherm Steel</b>			
<b>Closed profiles – right-angled and round</b>				
<b>ENV13381-4 Fire Resistance Classification R-90</b>				
Temperature	450	500	550	620
Section Factor $A_{pr} / V [m^{-1}]$	Thickness of fire protection material to maintain temperature below design temperature [ $\mu m$ ]			
50	781	668	575	469
60	845	722	623	508
70	918	780	674	550
80	995	842	730	595
90	1080	910	790	644
100	1162	993	855	698
110	1260	1060	926	755
120	1360	1150	1002	817
130	1470	1252	1084	884
140	1582	1358	1173	957
150	1723	1474	1269	1035
160	1835	1577	1373	1120
170	1985	1716	1485	1211
180	2140	1868	1606	1310
190	2320	2020	1737	1417
200	2551	2183	1879	1532
210	-	2382	2032	1657
220	-	2570	2197	1792
230	-	-	2376	1938
240	-	-	2569	2095
250	-	-	-	2265
260	-	-	-	2429
270	-	-	-	-
280	-	-	-	-
290	-	-	-	-
300	-	-	-	-
310	-	-	-	-
320	-	-	-	-
330	-	-	-	-
340	-	-	-	-
350	-	-	-	-
360	-	-	-	-
370	-	-	-	-
380	-	-	-	-
390	-	-	-	-
400	-	-	-	-