

(according to regulation EU No 305/2011)

No. LO-001-CPR2020-01-06

1) Code of the product type: **1.0039**

2) Type: Hot finished structural hollow sections (seamless tubes) S235JRH according to EN 10210:2019

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

3)

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | Performance | | | Harmonised technical specification | |
|-----------------------------|-------------------|-------------|----------------------|----------------|---------------------------------------|-----------------|
| Tolerances on | | | | Values | | |
| dimensions and | Outside | e diameter | ±1%, min ± | 0,5 and max | ± 10mm | |
| shape | Wall t | hickness | - 10% (loc. | -12,5%) / +8% | % mass | |
| | 0 | /ality | | 2% | | EN 10210-2:2019 |
| | Strai | ghtness | 0,2% of tota | I length and | 3mm/1m | |
| | N | lass | | for particular | | |
| Yield strength | Nomina | l thickness | | Values | | |
| | (1 | nm) | | | | |
| | > | ≤ | ReH min (MPa) | | | |
| | | 16 | 235 | | | |
| | 16 | 40 | 225 | | | |
| Tensile strength | Nomina | l thickness | | Values | | |
| | (1 | nm) | | | | |
| | > | ≤ | <i>R</i> m min (MPa) | max | (MPa) | |
| | | 100 | 360 | 5 | 10 | |
| Elongation | Nominal thickness | | | Values | | |
| | (1 | nm) | | | | |
| | > | ≤ | min (%) | | | |
| | | 40 | 26 | | | |
| Impact strength | Nomina | l thickness | | Values | | |
| | (1 | nm) | | | | EN 10210-1:2019 |
| | > | ≤ | KV2Lmin (J) | | | |
| | | 40 | 27 at 20°C | | | |
| Weldability CEV | Nomina | l thickness | | Values | | |
| | (1 | nm) | | | | |
| | > | ≤ | | | (%) | |
| | | 16 | | , | 37 | |
| | 16 | 40 | | 0, | 39 | |
| Durability | Nomina | l thickness | Values | | | |
| | (1 | nm) | | | | |
| | > | ≤ | | | < (%) | |
| | | 40 | | C : 0,22 | P : 0,050 | |
| | | | | Mn : 1,50 | S : 0,050 | |
| | 1 | 1 | 1 | N : 0,011 | | |



(according to regulation EU No 305/2011)

No. LO-002-CPR2020-01-06

1) Code of the product type: **1.0149**

2) Type: Hot finished structural hollow sections (seamless tubes) **S275J0H according to EN 10210:2019**

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

3)

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | | | Harmonised technical specification |
|-----------------------------|---------|------------------|----------------------|------------------------|-----------|---------------------------------------|
| Tolerances on | | | Values | | | |
| dimensions and | Outside | e diameter | ±1%, min ± | 0,5 and max | ± 10mm | |
| shape | Wall t | nickness | - 10% (loc. | -12,5%) / +8% | % mass | EN 10210-2:2019 |
| | 0\ | ality | | 2% | | EN 10210-2.2019 |
| | | ghtness | | I length and 3 | | |
| | | lass | -6% / +8% 1 | or particular | lengths | |
| Yield strength | | thickness nm) | | Values | | |
| | > | <u> </u> | ReH min (MPa) | | | |
| | | 16 | 275 | | | |
| | 16 | 40 | 265 | | | |
| Tensile strength | | thickness nm) | | Values | | |
| | > (' | ≤ | <i>R</i> m min (MPa) | max (| (MPa) | |
| | - | 3 | 430 | 58 | | |
| | 3 | 100 | 410 | | 60 | |
| Elongation | Nomina | thickness | | Values | | |
| U | (r | nm) | | | | |
| | > | | min (%) | | | |
| | | 40 | 23 | | | |
| Impact strength | | thickness nm) | | Values | | EN 10210-1:2019 |
| | > ` | Í≤ | KV2Lmin (J) | | | |
| | | 40 | 27 at 0°C | | | |
| Weldability CEV | | thickness nm) | | Values | | |
| | > | | | max | (%) | |
| | | 16 | | 0,4 | . , | |
| | 16 | 40 | - | 0,4 | | |
| Durability | Nomina | thickness | | Values | | |
| | (r | nm) | | | | |
| | > | | | max | | |
| | | 40 | 1 | C : 0,22 | P:0,045 | |
| | | | | Mn : 1,60 N : 0,011 | S : 0,045 | |



(according to regulation EU No 305/2011)

No. LO-003-CPR2020-01-06

1) Code of the product type: **1.0138**

2) Type: Hot finished structural hollow sections (seamless tubes) S275J2H according to EN 10210:2019

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

3)

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | | | Harmonised technical specification | |
|-----------------------------|---------|--------------------|------------------------------|---------------|-----------|---------------------------------------|--|
| Tolerances on | | | Values | | | | |
| dimensions and | Outside | e diameter | ±1%, min ±0,5 and max ± 10mm | | ± 10mm | | |
| shape | Wall t | hickness | - 10% (loc. | -12,5%) / +89 | % mass | EN 10210-2:2019 | |
| | 01 | /ality | | 2% | | EN 10210-2:2019 | |
| | Strai | ghtness | | I length and | | | |
| | | lass | -6% / +8% 1 | or particular | lengths | | |
| Yield strength | | l thickness nm) | | Values | | | |
| | > | , _≤ | ReH min (MPa) | | | | |
| | | 16 | 275 | | | | |
| | 16 | 40 | 265 | | | | |
| Tensile strength | | l thickness nm) | | Values | | | |
| | > (. | ≤ | <i>R</i> m min (MPa) | max | (MPa) | | |
| | | 3 | 430 | | 80 | | |
| | 3 | 100 | 410 | 5 | 60 | | |
| Elongation | Nomina | thickness | | Values | | | |
| • | (1 | nm) | | | | | |
| | > | ≤ | min (%) | | | | |
| | | 40 | 23 | | | | |
| Impact strength | | l thickness nm) | | Values | | EN 10210-1:2019 | |
| | > ` | , | KV2Lmin (J) | | | | |
| | | 40 | 27 at -20°C | | | | |
| Weldability CEV | | thickness nm) | | Values | | | |
| | , | ≤ | | max | K (%) | | |
| | | 16 | 1 | | 41 | | |
| | 16 | 40 | 1 | , | 43 | | |
| Durability | Nomina | thickness | | Values | | | |
| · · · · · | (1 | nm) | | | | | |
| | > | , ≤ | | max | K (%) | | |
| | | 40 | 1 | C : 0,22 | P : 0,040 | | |
| | | | | Mn : 1,60 | S : 0,040 | | |
| | | | | | | | |



(according to regulation EU No 305/2011)

No. LO-004-CPR2020-01-06

1) Code of the product type: **1.0493**

2) Type: Hot finished structural hollow sections (seamless tubes) **S275NH according to EN 10210:2019**

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

3)

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Performance | | | | Harmonised technica | |
|-------------------|--|---|--|--|--|
| | | | | specification | |
| | | | | | |
| | | | | | |
| Wall th | nickness | - 10% (loc. | -12,5%) / +8% | ∕₀ mass | EN 10210-2:2019 |
| | | | 2% | | EN 10210-2.2013 |
| | | | | | |
| | | -6% / +8% f | | lengths | |
| | | | Values | | |
| (r | nm) | | | | |
| > | | | | | |
| | | - | | | |
| - | | 265 | | | |
| | | | Values | | |
| · · · · | , | | | | |
| > | | | | | |
| | | 370 | | 10 | |
| | | Values | | | |
| | | | 1 (2/) | | |
| > | ≤ | | min (%) | | |
| | | longit. | trar | nsv. | |
| | 65 | 24 | 2 | 2 | |
| Nominal thickness | | | Values | | |
| (r | nm) | | | | EN 10210-1:2019 |
| ~ | ч | KV2Lmin (J) | | | |
| | 40 | 40 at -20°C | | | |
| Nominal thickness | | Values | | | |
| (r | nm) | | | | |
| > | ≤ | | | | |
| | 65 | | , | 40 | |
| | | Values | | | |
| (r | nm) | | | | |
| > | ≤ | in (%) | | | |
| | 65 | | | | |
| ĺ | | Al _{tot} : 0,015 | | | |
| ĺ | | | | | |
| 1 | | | | | |
| | | | | | |
| | | | Cr : 0,35 Mo : 0,13 | Ni : 0,35 Cu : 0,39 | |
| | Wall th Ov Straig M Nominal (r > 16 Nominal (r > Nominal (r > Nominal (r > | 16 16 16 16 40 Nominal thickness (mm) > ≤ 65 Nominal thickness (mm) > 65 Nominal thickness (mm) > 40 Nominal thickness (mm) > 40 Nominal thickness (mm) > ≤ 65 Nominal thickness (mm) | Outside diameter $\pm 1\%$, min \pm Wall thickness- 10% (loc.Ovality0,2% of totaMass-6% / +8% fNominal thickness (mm)-6% / +8% f> \leq ReH min (MPa)162751640265Nominal thickness (mm)< | Outside diameterValuesOutside diameter $\pm 1\%$, min ± 0.5 and maxWall thickness -10% (loc. $-12,5\%$) / $\pm 8\%$ Ovality 2% Straightness $0,2\%$ of total length and 3 Mass -6% / $\pm 8\%$ for particularNominal thicknessValues(mm) 16 275 16 40 265 Nominal thicknessValues(mm) 25 $2 \leq ReH min (MPa)$ max $2 \leq Rm min (MPa)$ max $3 \leq S$ $Rm min (MPa)$ $2 \leq Rm min (MPa)$ max $3 \leq S$ $Rm min (MPa)$ $3 \leq S$ S | ValuesOutside diameter $\pm 1\%$, min ± 0.5 and max ± 10 mmWall thickness -10% (loc. $-12,5\%$) / $+8\%$ massOvality 2% Straightness $0,2\%$ of total length and 3mm/1mMass -6% / $+8\%$ for particular lengthsNominal thicknessValues(mm)16 265 16Nominal thicknessValues(mm)265Nominal thicknessValues(mm) 510 ≥ 4 Rm min (MPa) $\Rightarrow \leq 8$ Rm min (MPa) 65 370 510 510 Nominal thicknessValues(mm) 10 dgit. $\Rightarrow \leq 10$ 10 dgit. 65 24 22 Nominal thickness(mm) 40 $\Rightarrow \leq 4$ 22 Nominal thickness $Values$ (mm) 40 $\Rightarrow \leq 5$ $Max (\%)$ $\Rightarrow \leq 65$ $0,40$ Nominal thickness $0,40$ mm $2 \leq 1n (\%)$ $\Rightarrow \leq 1n (\%)$ $max (\%)$ $\Rightarrow \leq 1n (\%)$ $0,40$ Nominal thickness $0,22$ (mm) $2 \leq 0.22$ $\Rightarrow 1n (\%)$ $10,05$ $8 \in 0,015$ $10,015$ $8 \in 0,035$ $10,040$ $8 \in 0,035$ $10,040$ $8 \in 0,035$ $10,040$ $8 \in 0,035$ $10,040$ |



(according to regulation EU No 305/2011)

No. LO-005-CPR2020-01-06

1) Code of the product type: **1.0497**

2) Type: Hot finished structural hollow sections (seamless tubes) S275NLH according to EN 10210:2019

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

3)

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | Performance | | | Harmonised technical specification | |
|-----------------------------|---------------------------|------------------|---------------------------|---------------|---------------------------------------|-----------------|
| Tolerances on | | | | Values | | specification |
| dimensions and | Outoida | diameter | ±10/ min ± | 0,5 and max | + 10mm | |
| shape | | nickness | | | | |
| Snape | | | - 10% (IOC. | -12,5%) / +8% | % mass | EN 10210-2:2019 |
| | | ality | | 2% | | |
| | | ghtness | | I length and | | |
| | | ass | -6% / +8% t | or particular | lengths | |
| Yield strength | | thickness nm) | | Values | | |
| | > | ч | ReH min (MPa) | | | |
| | | 16 | 275 | | | |
| | 16 | 40 | 265 | | | |
| Tensile strength | | thickness nm) | | Values | | |
| | > | , ≤ | <i>R</i> m min (MPa) | max | (MPa) | |
| | | 65 | 370 | | 10 | |
| Elongation | Nominal thickness | | Values | | | |
| Liongation | (mm) | | | Values | | |
| | > ≤ | | | min (%) | | |
| | | | longit. | trar | nsv. | |
| | | 65 | 24 | - | 2 | |
| Impact strength | Nominal thickness | | | Values | | |
| | (r | nm) | | | | EN 10210-1:2019 |
| | > | ≤ | KV2Lmin (J) | | | |
| | | 40 | 27 at -50°C | | | |
| Weldability CEV | Nominal thickness (mm) | | Values | | | |
| | > (. | ≤ | | max | x (%) | |
| | | 65 | 1 | | 40 | |
| Durability | Nomina | thickness | | Values | - | |
| , | (r | nm) | Values | | | |
| | > | ≤ | in (%) | max | x (%) | |
| | - | 65 | Mn : 0,35 | C : 0,22 | Si: 0,45 | |
| | | •• | Al _{tot} : 0,015 | Mn : 0,60 | P: 0.035 | |
| | | | | S : 0,030 | Nb : 0,060 | |
| | | | | V:0,10 | Ti : 0,04 | |
| | | | | Cr : 0,35 | Ni : 0,35 | |
| | | | | Mo : 0,13 | Cu : 0,39 | |
| | 1 | | | N : 0,017 | | |



(according to regulation EU No 305/2011)

No. LO-006-CPR2020-01-06

1) Code of the product type: **1.0547**

2) Type: Hot finished structural hollow sections (seamless tubes) S355J0H according to EN 10210:2019

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czec

3)

719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | | Harmonised technical specification |
|-----------------------------|---------|--------------------|---------------|------------------------|---------------------------------------|
| Tolerances on | | | Values | | |
| dimensions and | Outside | e diameter | ±1%, min ± | 0,5 and max ± 10mm | |
| shape | Wall t | hickness | - 10% (loc. | 12,5%) / +8% mass | EN 10210-2:2019 |
| | | vality | | 2% | EN 10210-2.2019 |
| | Strai | ghtness | | al length and 3mm/1m | |
| | | lass | -6% / +8% 1 | for particular lengths | |
| Yield strength | | l thickness mm) | | Values | |
| | > |) | ReH min (MPa) | | |
| | - | 16 | 355 | | |
| | 16 | 40 | 345 | | |
| Tensile strength | Nomina | I thickness | | Values | |
| . | (| mm) | | | |
| | > | | Rm min (MPa) | max (MPa) | |
| | | 3 | 510 | 680 | |
| | 3 | 100 | 470 | 630 | |
| Elongation | Nomina | l thickness | | Values | |
| | (| mm) | | | |
| | > | ≤ | min (%) | | |
| | | 40 | 22 | | |
| Impact strength | | l thickness mm) | | Values | EN 10210-1:2019 |
| | > | ≤ | KV2Lmin (J) | | |
| | | 40 | 27 at 0°C | | |
| Weldability CEV | | l thickness mm) | | Values | |
| | > | Í≤ | | max (%) | |
| | | 16 | | 0,45 | |
| | 16 | 40 | | 0,47 | |
| Durability | Nomina | I thickness | | Values | |
| - | (| mm) | | | |
| | > | ≤ | | max (%) | |
| | | 40 | | C: 0,25 P: 0,045 | |
| | | | | Mn : 1,70 S : 0,045 | |
| | | | | Si:0,60 N:0,011 | |



(according to regulation EU No 305/2011)

No. LO-007-CPR2020-01-06

1) Code of the product type: **1.0576**

2) Type: Hot finished structural hollow sections (seamless tubes) S355J2H according to EN 10210:2019

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

3)

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | | Harmonised technical specification | |
|-----------------------------|---------|--------------------|------------------------------|--|---------------------------------------|--|
| Tolerances on | | | | Values | • | |
| dimensions and | Outside | e diameter | ±1%, min ±0,5 and max ± 10mm | | | |
| shape | Wall t | hickness | - 10% (loc. | 12,5%) / +8% mass | EN 10210-2:2019 | |
| | 0 | /ality | | 2% | EN 10210-2:2019 | |
| | Strai | ghtness | | al length and 3mm/1m | | |
| | | lass | -6% / +8% 1 | for particular lengths | | |
| Yield strength | | l thickness nm) | | Values | | |
| | > | | ReH min (MPa) | | | |
| | | 16 | 355 | | | |
| | 16 | 40 | 345 | | | |
| Tensile strength | | l thickness nm) | | Values | | |
| | > ` | Í≤ | <i>R</i> m min (MPa) | max (MPa) | | |
| | | 3 | 510 | 680 | | |
| | 3 | 100 | 470 | 630 | | |
| Elongation | Nomina | thickness | | Values | | |
| | (1 | nm) | | | | |
| | > | ≤ | min (%) | | | |
| | | 40 | 22 | | | |
| Impact strength | | l thickness nm) | | Values | EN 10210-1:2019 | |
| | > | _ ≤ | KV2Lmin (J) | | | |
| | | 40 | 27 at -20°C | | | |
| Weldability CEV | | l thickness nm) | | Values | | |
| | > | , ≤ | | max (%) | | |
| | | 16 | | 0,45 | | |
| | 16 | 40 | 1 | 0,47 | | |
| Durability | Nomina | l thickness | | Values | | |
| - | (1 | nm) | | | | |
| | > | ≤ | | max (%) | | |
| | | 40 | | C : 0,25 P : 0,040 Mn : 1,70 S : 0,040 Si : 0,60 | | |



(according to regulation EU No 305/2011)

No. LO-008-CPR2020-01-06

1) Code of the product type: **1.0539**

2) Type: Hot finished structural hollow sections (seamless tubes) S355NH according to EN 10210:2019

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

3)

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | | Harmonised technical specification |
|-----------------------------|-------------------|--------------------|---------------------------|-----------------------|---------------------------------------|
| Tolerances on | | | | Values | |
| dimensions and | Outside | e diameter | | | |
| shape | | hickness | | -12,5%) / +8% mass | |
| onapo | | vality | - 10 /8 (100. | 2% | EN 10210-2:2019 |
| | | ghtness | 0.2% of tota | I length and 3mm/1 | |
| | | Jass | | or particular lengths | |
| Yield strength | | l thickness | -0 /0 / +0 /0 | Values | |
| neid strength | | mm) | | values | |
| | > (' | | <i>R</i> eH min (MPa) | | |
| | | 16 | 355 | | |
| | 16 | 40 | 345 | | |
| Tensile strength | Nomina | I thickness mm) | 040 | Values | |
| | () > |) ≤ | Rm min (MPa) | max (MPa) | |
| | - | 65 | 470 | 630 | |
| Elongation | Nomina | Nominal thickness | | Values | |
| Liongation | (mm) | | | | |
| | > ≤ | | | min (%) | |
| | | | longit. | transv. | |
| | | 65 | 22 | 20 | |
| Impact strength | Nominal thickness | | | Values | |
| | (| <u>mm)</u> | | | EN 10210-1:2019 |
| | > | ≤ | KV2Lmin (J) | | EN 10210-1:2019 |
| | | 40 | 40 at -20°C | | |
| Weldability CEV | Nomina | l thickness | | Values | |
| | (1 | mm) | | | |
| | > | ≤ | | max (%) | |
| | | 16 | | 0,43 | |
| | 16 | 65 | | 0,45 | |
| Durability | Nomina | I thickness | | Values | |
| - | (1 | mm) | | | |
| | > | ≤ | in (%) | max (%) | |
| | | 65 | Mn : 0,85 | C: 0,22 Si: 0 | |
| | | | Al _{tot} : 0,015 | Mn:1,75 P:0 | |
| | | | | S:0,035 Nb:0 | |
| | | | | V:0,14 Ti:0 | |
| | | | | Cr: 0,35 Ni: 0 | |
| | | | | Mo: 0,13 Cu: | 0,39 |
| | | | | N : 0,022 | |



(according to regulation EU No 305/2011)

No. LO-009-CPR2020-01-06

1) Code of the product type: **1.0549**

2) Type: Hot finished structural hollow sections (seamless tubes) S355NLH according to EN 10210:2019

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

3)

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | | Harmonised technical specification |
|-----------------------------|---------------------------|--------------------|---------------------------|-----------------------|---------------------------------------|
| Tolerances on | | | Values | | |
| dimensions and | Outside | e diameter | +1% min + | 0,5 and max ± 10mm | |
| shape | | hickness | | -12,5%) / +8% mass | |
| | | vality | 1070 (100. | 2% | EN 10210-2:2019 |
| | | ghtness | 0.2% of tota | I length and 3mm/1n | |
| | | lass | | or particular lengths | |
| Yield strength | | l thickness | -0/07 +0/01 | Values | |
| neia strength | | mm) | | Values | |
| | > | | ReH min (MPa) | | |
| | - | 16 | 355 | | |
| | 16 | 40 | 345 | | |
| Tensile strength | | l thickness mm) | | Values | |
| | > | Í ≤ | Rm min (MPa) | max (MPa) | |
| | | 65 | 470 | 630 | |
| Elongation | Nominal thickness (mm) | | | Values | |
| | > ≤ | | | min (%) | |
| | | | longit. | transv. | |
| | | 65 | 22 | 20 | |
| Impact strength | Nominal thickness (mm) | | | Values | |
| | > | Í≤ | KV2Lmin (J) | | EN 10210-1:2019 |
| | | 40 | 27 at -50°C | | |
| Weldability CEV | Nominal thickness (mm) | | | Values | |
| | > | Í≤ | | max (%) | |
| | | 16 | 1 | 0,43 | |
| | 16 | 65 | 1 | 0,45 | |
| Durability | | l thickness mm) | | Values | |
| | > | ≤ | in (%) | max (%) | |
| | | 65 | Mn : 0,85 | C: 0,20 Si: 0 | ,55 |
| | | | Al _{tot} : 0,015 | Mn: 1,75 P: 0, | |
| | | | | S:0,030 Nb:0 | ,060 |
| | | | | V:0,14 Ti:0 | ,04 |
| | | | | Cr: 0,35 Ni: 0 | |
| | | | | Mo:0,13 Cu:0 |),39 |
| | | | | N : 0,022 | |



| | Declaration of Performance (according to regulation EU No 305/2011) | |
|-----|--|--|
| | No. LO-022-CPR2020-01-06 | |
| 1) | Code of the product type: 1.0512 | |
| 2) | Type: Hot finished structural hollow sections (seamless tubes) S355K2H according to EN 10210:2019 | |
| | Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer: | |
| 3) | To be used in welded structures Liberty Ostrava a.s. Vratimovská 689/117 | |
| | 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980 | |
| | System of assessment and verification of constancy of performance of the product: System 2+ | |
| | tified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the anufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control. | |
| The | e performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table. | |
| | This declaration of performance is issued under the sole sponsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by: | |
| | Radim Svěchovský Michal Kolář | |

shape Wall thickness - 10% (loc. -12,5%) / +8% mass EN 10210-2:2019 2% Ovality 0,2% of total length and 3mm/1m Straightness -6% / +8% for particular lengths Mass Yield strength Values Nominal thickness (mm) ReH min (MPa) > ≤ 16 355 16 40 345 **Tensile strength** Nominal thickness Values (mm) Rm min (MPa) max (MPa) > ≤ 680 3 510 100 470 630 3 Elongation Nominal thickness Values (mm) min (%) > ≤ 40 22 Impact strength Nominal thickness Values EN 10210-1:2019 (mm) KV2Lmin (J) > ≤ 40 40 at -20°C Weldability CEV Nominal thickness Values (mm) > ≤ max (%) 16 0,45 16 40 0,47 Durability Nominal thickness Values (mm) max (%) > ≤ C:0,25 40 P:0,040 Mn : 1,70 S:0,040

Performance

Outside diameter

Values

±1%, min ±0,5 and max ± 10mm

Si : 0,60

Harmonised technical

specification

Essential

characteristic

Tolerances on

dimensions and

Q-Engineer – LO a.s

Q/A manager – LO a.s.

Invall

Date. 06.01. 2020



Declaration of Performance (according to regulation EU No 305/2011) No. LO-023-CPR2020-01-06 Code of the product type: 1.8750 1) Type: Hot finished structural hollow sections (seamless 2) tubes) S420NH according to EN 10210:2019 Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer: To be used in welded structures 3) Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980 System of assessment and verification of constancy of performance of the product: System 2+ Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control. The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by: Radim Svěchovský Michal Kolář Q-Engineer – LO a.s Q/A manager - LO a.s. Date. 06.01. 2020

| Essential Performance characteristic | Harmonised technical specification |
|---|------------------------------------|
| Tolerances on Value | |
| | |
| | |
| | EN 10210-2:2019 |
| Ovality 2% | |
| Straightness 0,2% of total length | |
| Mass -6% / +8% for parti | |
| Yield strength Nominal thickness Value | S |
| (mm) | |
| > ≤ <i>R</i> eH min | |
| (MPa) | |
| | |
| 16 40 400 | |
| Tensile strength Nominal thickness Values | S |
| (mm) | |
| | max (MPa) |
| (MPa) 65 520 | 680 |
| | |
| Elongation Nominal thickness Values | S |
| (mm) | () |
| > ≤ min (% | · · |
| longit. | transv. |
| 65 19 | 17 |
| Impact strength Nominal thickness Value | |
| (mm) | EN 10210-1:2019 |
| > ≤ KV2Lmin (J) | |
| 40 40 at -20°C | |
| Weldability CEV Nominal thickness Value | s |
| (mm) | |
| > < | max (%) |
| 16 | 0,50 |
| 16 65 | 0,52 |
| Durability Nominal thickness Value | s |
| (mm) | |
| > ≤ in (%) | max (%) |
| | 0,25 Si: 0,65 |
| Al _{tot} : 0,015 Mn : 1 | |
| | ,035 Nb : 0,060 |
| V:0 | |
| Cr : 0 |),35 Ni : 0,85 |
| Mo : (| 0,13 Cu : 0,77 |
| N : 0, | 027 |



| – • • | | |
|--|--|----------------------|
| | of Performance ation EU No 305/2011) | Essenti character |
| No. LO-02 | 24-CPR2020-01-06 | Tolerance |
| 1) Code of the | product type: 1.8751 | dimension shape |
| | ctural hollow sections (seamless ccording to EN 10210:2019 | |
| accordance with the app | the construction product, in licable harmonised technical seen by the manufacturer: | Yield stre |
| To be used in | welded structures | |
| Vratin 719 00 Ostrava - Tel: +4 | ty Ostrava a.s. novská 689/117 Kunčice - Czech Republic 120 595 682 501 120 596 237 980 | Tensile stro |
| performance | nd verification of constancy of e of the product: stem 2+ | Elongati |
| TÜV NORD performed manufacturing plant and of fa continuous surveillance, a factory production contro | ontrol certification body No. 0045 I the initial inspection of the actory production control and the assessment, and evaluation of ol and issued the certificate of ctory production control. | Impact stre |
| | uct identified in point 1 and 2 is in red performance in the table. | Weldability |
| responsibility of the manufac | nance is issued under the sole sturer identified in point 3. Signed of the manufacturer by: | Durabili |
| Radim Svěchovský | Michal Kolář | |
| | | |
| Q-Engineer – LO a.s | Q/A manager – LO a.s. | |
| Juiall. | L | |

En

| Essential | r | | Performance | | Harmonised technical |
|------------------|---------|------------------|---------------------------|-------------------------------|----------------------|
| characteristic | | | Ferrormance | | specification |
| Tolerances on | | | | Values | specification |
| dimensions and | Outside | diameter | +1% min +(|),5 and max ± 10m | m |
| shape | | nickness | | -12,5%) / +8% mas | s |
| | | ality | | 2% | EN 10210-2:2019 |
| | | ghtness | 0.2% of total | length and 3mm/1 | m |
| | | ass | | or particular length | |
| Yield strength | Nominal | thickness | | Values | |
| - | (n | nm) | | | |
| | > | ≤ | <i>R</i> eH min (MPa) | | |
| | | 16 | 420 | | |
| | 16 | 40 | 400 | | |
| Tensile strength | - | thickness | | Values | |
| | | nm) | | | |
| | > | <u></u> | <i>R</i> m min (MPa) | max (MPa) | |
| | | 65 | 520 | 680 | |
| Elongation | Nominal | thickness | | Values | |
| - | (n | nm) | | | |
| | > | ≤ | | min (%) | |
| | | | longit. | transv. | |
| | | 65 | 19 | 17 | |
| Impact strength | Nominal | thickness | | Values | |
| | (n | nm) | | | EN 10210-1:2019 |
| | > | ≤ | KV2Lmin (J) | | |
| | | 40 | 27 at -50°C | | |
| Weldability CEV | Nominal | thickness | | Values | |
| | (n | nm) | | - | |
| | > | ≤ | | max (%) | |
| | | 16 | | 0,50 | |
| | 16 | 65 | | 0,52 | |
| Durability | | thickness nm) | | Values | |
| | > | ≤ | in (%) | max (%) | |
| | | 65 | Mn : 0,95 | C:0,25 Si:0, | |
| | | | Al _{tot} : 0,015 | Mn:1,80 P:0,0 | |
| | | | | S: 0,030 Nb: 0, | |
| | | | | V:0,22 Ti:0, | |
| | | | | Cr:0,35 Ni:0, Mo:0,13 Cu:0 | |
| | | | | N : 0,027 | , |
| | • | | | | |

Date. 06.01. 2020



| | Declaration of Pe (according to regulation | | E cha |
|-----|--|---|----------|
| | No. LO-025-CF | PR2020-01-06 | Tole |
| 1) | Code of the prode | uct type: 1.8953 | dime |
| 2) | Type: Hot finished structural tubes) S460NH accord | | |
| | Intended use or uses of the c accordance with the applicab specification, as foreseen | le harmonised technical | Yie |
| | To be used in weld | ed structures | |
| 3) | Liberty Os Vratimovsk 719 00 Ostrava - Kund Tel: +420 5 Fax:+420 5 | á 689/117 šice - Czech Republic 95 682 501 | Tens |
| | System of assessment and ve performance of the System | ne product: | E |
| | otified factory production control TÜV NORD performed the i anufacturing plant and of factory continuous surveillance, asses factory production control and conformity of the factory | nitial inspection of the y production control and the sment, and evaluation of issued the certificate of | Impa |
| Th | e performance of the product id conformity with the declared p | | Weld |
| | This declaration of performance sponsibility of the manufacturer for and on behalf of the | identified in point 3. Signed | |
| | Radim Svěchovský | Michal Kolář | |
| Q-I | Engineer – LO a.s | Q/A manager – LO a.s. | |
| | fridel. | fr | |
| | | | |

| Essential characteristic | | | Performance | • | | Harmonised technical specification |
|-----------------------------|---------|------------------|---------------------------|-----------------------|------------------------|---------------------------------------|
| Tolerances on | | | | Values | | • |
| dimensions and | Outside | diameter | ±1%, min ±0 |),5 and max | t ± 10mm | |
| shape | Wall th | nickness | - 10% (loc. | | | |
| - | Ov | ality | · · · · | 2% | | EN 10210-2:2019 |
| | | ghtness | 0,2% of total | length and | l 3mm/1m | |
| | | ass | -6% / +8% fo | | | |
| Yield strength | Nominal | thickness | | Values | | |
| - | (n | nm) | | | | |
| | ^ | ≤ | <i>R</i> eH min (MPa) | | | |
| | | 16 | 460 | | | |
| | 16 | 40 | 440 | | | |
| Tensile strength | | thickness nm) | | Values | | |
| | ۸ | ≤ | <i>R</i> m min (MPa) | max | (MPa) | |
| | | 65 | 540 | 72 | 20 | |
| Elongation | | thickness nm) | Values | | | |
| | ^ | ≤ | | min (%) | | |
| | | | longit. | trar | isv. | |
| | | 65 | 17 | 1 | 5 | |
| Impact strength | Nominal | thickness | | Values | - | |
| J | | nm) | | | | EN 10210-1:2019 |
| | > | _ ≤ | KV2Lmin (J) | | | |
| | | 40 | 40 at -20°C | | | |
| Weldability CEV | Nominal | thickness | | Values | | |
| - | (n | nm) | | | | |
| | ^ | ≤ | | max | : (%) | |
| | | 16 | | 0, | 53 | |
| | 16 | 65 | | 0, | 55 | |
| Durability | Nominal | thickness | | Values | | |
| | (n | nm) | | | | |
| | > | ≤ | in (%) | max | | |
| | | 65 | Mn : 0,95 | C : 0,25 | Si : 0,65 | |
| | | | Al _{tot} : 0,015 | Mn : 1,80 | P:0,040 | |
| | | | | | Nb: 0,060 | |
| | | | | V : 0,22 Cr : 0,35 | Ti : 0,04 Ni : 0,85 | |
| | | | | Mo : 0,13 | | |
| | | | | N : 0,027 | Su . 0,77 | |
| | | I | | , | | |

Date : 06.01. 2020



| Declaration of Performance | Ess |
|---|------------|
| (according to regulation EU No 305/2011) | chara |
| No. LO-026-CPR2020-01-06 | Tolera |
| 1) Code of the product type: 1.8956 | dimen s |
| 2) Type: Hot finished structural hollow sections (seamless tubes) S460NLH according to EN 10210:2019 | |
| Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer: | Yield |
| To be used in welded structures | |
| 3) Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 | Tensile |
| Fax:+420 596 237 980 | |
| System of assessment and verification of constancy of performance of the product: System 2+ | Elor |
| Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control. | Impac |
| The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table. | Welda |
| This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by: | Du |
| Radim Svěchovský Michal Kolář | |
| Q-Engineer – LO a.s Q/A manager – LO a.s. | |
| Guiafl. La | |

| Essential | | | Performance | | Harmonised technical | |
|------------------|---------|-----------|---------------------------|-----------------------|----------------------|--|
| characteristic | | | | | specification | |
| Tolerances on | | | | Values | | |
| dimensions and | Outside | diameter | ±1%, min ±0 | ,5 and max ± 10mm | | |
| shape | Wall th | nickness | - 10% (loc. | -12,5%) / +8% mass | EN 10210-2:2019 | |
| | Ov | ality | | 2% | EN 10210-2.2019 | |
| | Straig | phtness | 0,2% of total | length and 3mm/1m | | |
| | М | ass | -6% / +8% fo | or particular lengths | | |
| Yield strength | Nominal | thickness | | Values | | |
| | (n | nm) | | | | |
| | > | ≤ | <i>R</i> eH min | | | |
| | | | (MPa) | | | |
| | | 16 | 460 | | | |
| | 16 | 40 | 440 | | | |
| Tensile strength | Nominal | thickness | | Values | | |
| | (n | nm) | | | | |
| | > | ≤ | <i>R</i> m min | max (MPa) | | |
| | | | (MPa) | | | |
| | | 65 | 540 | 720 | | |
| Elongation | | thickness | | Values | | |
| | (n | nm) | | | | |
| | > | ≤ | | min (%) | | |
| | | | longit. | transv. | | |
| | | 65 | 17 | 15 | | |
| Impact strength | Nominal | thickness | | Values | | |
| | (n | nm) | | | EN 10210-1:2019 | |
| | > | ≤ | KV2Lmin (J) | | | |
| | | 40 | 27 at -50°C | | | |
| Weldability CEV | Nominal | thickness | | Values | | |
| • | (n | nm) | | | | |
| | > | | | max (%) | | |
| | | 16 | | 0,53 | | |
| | 16 | 65 | | 0,55 | | |
| Durability | Nominal | thickness | | Values | | |
| | (n | nm) | | | | |
| | > | | in (%) | max (%) | | |
| | | 65 | Mn : 0,95 | C: 0,25 Si: 0,65 | | |
| | | | Al _{tot} : 0,015 | Mn: 1,80 P: 0,035 | | |
| | | | | S: 0,030 Nb: 0,060 | | |
| | | | | V: 0,22 Ti: 0,04 | | |
| | | | | Cr: 0,35 Ni: 0,85 | | |
| | | | | Mo: 0,13 Cu: 0,77 | | |
| | | | 1 | N : 0,027 | | |

Date. 06.01. 2020



(according to regulation EU No 305/2011)

No. LO-010-CPR2020-01-06

1) Code of the product type: **1.0039**

2) Type: Cold formed welded structural hollow sections (SAWH tubes) **S235JRH according to EN 10219:2006**

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s. **Michal Kolář** Q/A manager – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | | Harmonised technical specification | | |
|---------------------------------|--------|--------------------|-------------------------------|------------------------------------|---------------------------------------|-----------------|--|
| Tolerances on dimensions and | | | | | | | |
| shape | Wall t | hickness | For D≤406,4r T>5mm ±5mm; f | nm: T≤5mm : | ±10% and | EN 10219-2:2006 | |
| | 0 | /ality | 2%, for D/T | ≥100 must be al length and | | | |
| | N | ghtness lass | | particular lei | | | |
| Yield strength | | l thickness nm) | | Values | | | |
| | > | <u>≤</u> 16 | ReH min (MPa) 235 | | | | |
| | 16 | 40 | 225 | | | | |
| Tensile strength | | l thickness nm) | | Values | | | |
| | > | ≤ | <i>R</i> m min (MPa) | | (MPa) | | |
| | | 40 | 360 | - | 10 | | |
| Elongation | | l thickness nm) | | Values | | | |
| | > | ≤ | min (%) | | | | |
| | | 40 | 24 | | | | |
| Impact strength | | l thickness mm) | | Values | | EN 10219-1:2006 | |
| | > | ≤ | KV2Lmin (J) | | | | |
| | | 40 | 27 at 20°C | | | | |
| Weldability CEV | | thickness | | Values | | | |
| | > | ≤ | | | (%) | | |
| | | 40 | | -) | 35 | | |
| Durability | | l thickness nm) | | Values | | | |
| | > | ≤ | | max | (%) | | |
| | | 40 | | C : 0,19 Mn : 1,50 N : 0,011 | P : 0,050 S : 0,050 | | |



(according to regulation EU No 305/2011)

No. LO-011-CPR2020-01-06

1) Code of the product type: **1.0149**

2) Type: Cold formed welded structural hollow sections (SAWH tubes) **S275J0H according to EN 10219:2006**

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s. **Michal Kolář** Q/A manager – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | Performance | | |
|-----------------------------|-------------------|------------------|----------------------|------------------------|------------------|--|
| Tolerances on | l l | | | | | |
| dimensions and | Outside | diameter | ±1%. min ± | 0,5 and max ± 10mm | | |
| shape | | | | mm: T≤5mm ±10% and | | |
| | | | | or D<406,4mm: ±10% and | | |
| | Wall th | nickness | | nax ±2mm | EN 10219-2:2006 | |
| | Ov | ality | 2%, for D/T | ≥100 must be agreed | | |
| | Straig | phtness | 0,20% of tot | al length and 3mm/1m | | |
| | M | ass | | particular lengths | | |
| Yield strength | Nominal | thickness | | Values | | |
| | (n | nm) | | | | |
| | ۲ ۲ | × | ReH min (MPa) | | | |
| | | 16 | 275 | | | |
| | 16 | 40 | 265 | | | |
| Tensile strength | Nominal thickness | | Values | | | |
| | (n | nm) | | | | |
| | > | ≤ | <i>R</i> m min (MPa) | max (MPa) | | |
| | | 40 | 410 | 560 | | |
| Elongation | Nominal | thickness | | Values | | |
| | (n | nm) | | | | |
| | > | 5 | min (%) | | | |
| | | 40 | 20 | | | |
| Impact strength | Nominal | thickness | | Values | EN 10219-1:2006 | |
| | (n | nm) | | | 211 10210 112000 | |
| | > | ≤ | KV2Lmin (J) | | | |
| | | 40 | 27 at 0°C | | | |
| Weldability CEV | | thickness nm) | | Values | | |
| | > | , | | max (%) | | |
| | | 40 | | 0,40 | | |
| Durability | Nominal | thickness | | Values | | |
| • | (n | nm) | | | | |
| | > | S | | max (%) | | |
| | | 40 | 1 | C : 0,22 P : 0,045 | | |
| | | | | Mn : 1,60 S : 0,045 | | |
| | | | | N : 0,011 | | |



(according to regulation EU No 305/2011)

No. LO-012-CPR2020-01-06

1) Code of the product type: **1.0138**

2) Type: Cold formed welded structural hollow sections (SAWH tubes) **S275J2H according to EN 10219:2006**

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s. **Michal Kolář** Q/A manager – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | | Harmonised technical specification | | |
|-----------------------------|-------------------|-----------|----------------------|----------------|---------------------------------------|-----------------|--|
| Tolerances on | | | Values | | | | |
| dimensions and | Outside | diameter | ±1%, min ± | 0,5 and max : | ± 10mm | | |
| shape | | | For D≤406,4r | nm: T≤5mm ± | ±10% and | | |
| | | | T>5mm ±5mm; f | or D<406,4m | m: ±10% and | EN 40240 2-2000 | |
| | Wall th | nickness | r | nax ±2mm | | EN 10219-2:2006 | |
| | Ov | ality | 2%, for D/T | ≥100 must be | e agreed | | |
| | Straig | ghtness | 0,20% of tota | al length and | 3mm/1m | | |
| | м | ass | ±-6% for | particular ler | ngths | | |
| Yield strength | Nominal | thickness | | Values | | | |
| | (n | nm) | | | | | |
| | > | ≤ | ReH min (MPa) | | | | |
| | | 16 | 275 | | | | |
| | 16 | 40 | 265 | | | | |
| Tensile strength | Nominal thickness | | | Values | | | |
| | (n | nm) | |) max (MPa) | | | |
| | > | ≤ | <i>R</i> m min (MPa) | | | | |
| | | 40 | 410 | 50 | 60 | | |
| Elongation | Nominal | thickness | | Values | | | |
| | (n | nm) | | | | | |
| | > | Ч | min (%) | | | | |
| | | 40 | 20 | | | | |
| Impact strength | Nominal thickness | | | Values | | EN 10219-1:2006 | |
| | (n | nm) | | | | EN 10213-1.2000 | |
| | > | Ч | KV2Lmin (J) | | | | |
| | | 40 | 27 at -20°C | | | | |
| Weldability CEV | Nominal | thickness | | Values | | | |
| | (n | nm) | | | | | |
| | > | Ч | | max | k (%) | | |
| | | 40 | | 0, | 40 | | |
| Durability | Nominal | thickness | | Values | | | |
| | (n | nm) | | | | | |
| | > | Ч | | | k (%) | | |
| | | 40 | | C : 0,22 | P:0,040 | | |
| | | | | Mn : 1,60 | S : 0,040 | | |
| | | | | N : 0,011 | | | |



(according to regulation EU No 305/2011)

No. LO-013-CPR2020-01-06

1) Code of the product type: **1.0547**

2) Type: Cold formed welded structural hollow sections (SAWH tubes) S355J0H according to EN 10219:2006

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 2+

Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control.

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s. **Michal Kolář** Q/A manager – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | Harmonised technical specification | | | |
|-----------------------------|---------|-----------|---------------|---------------------------------------|-----------------|-----------------|--|
| Tolerances on | | | | Values | | | |
| dimensions and | Outside | diameter | ±1%, min ± | 0,5 and max | ± 10mm | | |
| shape | | | For D≤406,4r | nm: T≤5mm : | ±10% and | | |
| • | | | T>5mm ±5mm; f | | | | |
| | Wall th | nickness | 'n | nax ±2mm | | EN 10219-2:2006 | |
| | Ov | ality | 2%, for D/T | ≥100 must be | e agreed | | |
| | Straig | htness | 0,20% of tota | al length and | 3mm/1m | | |
| | м | ass | | particular le | | | |
| Yield strength | Nominal | thickness | | Values | • | | |
| Ū | (n | nm) | | | | | |
| | > | <u> </u> | ReH min (MPa) | | | | |
| | | 16 | 355 | | | | |
| | 16 | 40 | 345 | | | | |
| Tensile strength | Nominal | thickness | | Values | | | |
| • | (n | nm) | | | | | |
| | > | <u> </u> | Rm min (MPa) | max (MPa) | | | |
| | | 40 | 470 | 6 | 30 | | |
| Elongation | Nominal | thickness | | Values | | | |
| | (n | nm) | | | | | |
| | > | ≤ | min (%) | | | | |
| | | 40 | 20 | | | | |
| Impact strength | Nominal | thickness | Values | | EN 10219-1:2006 | | |
| | (n | nm) | | | | EN 10219-1.2000 | |
| | > | 5 | KV2Lmin (J) | | | | |
| | | 40 | 27 at 0°C | | | | |
| Weldability CEV | Nominal | thickness | Values | | | | |
| - | (n | nm) | | | | | |
| | > | 5 | | max | < (%) | | |
| | | 40 | | 0, | 45 | | |
| Durability | Nominal | thickness | | Values | | | |
| | (n | nm) | | | | | |
| | > | ≤ | | max | (%) | | |
| | | 40 | | C : 0,24 | P:0,045 | | |
| | | | | Mn : 1,60 | S : 0,045 | | |
| | | | | Si : 0,60 | N : 0,011 | | |



Declaration of Performance (according to regulation EU No 305/2011) No. LO-014-CPR2020-01-06 1) Code of the product type: 1.0576 Type: Cold formed welded structural hollow sections 2) (SAWH tubes) S355J2H according to EN 10219:2006 Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer: To be used in welded structures 3) Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980 System of assessment and verification of constancy of performance of the product: System 2+ Notified factory production control certification body No. 0045 TÜV NORD performed the initial inspection of the manufacturing plant and of factory production control and the continuous surveillance, assessment, and evaluation of factory production control and issued the certificate of conformity of the factory production control. The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by: Radim Svěchovský Michal Kolář

Q-Engineer – LO a.s.

Q/A manager – LO a.s.

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| Essential characteristic | | | | Harmonised technical specification | | |
|--|---------|-----------------------------|-----------------------------|---|---------------------------------|-----------------|
| Tolerances on dimensions and shape | Outside | diameter | ±1%, min ± For D≤406,4r | Values 0,5 and max : | · | |
| Shape | Wall ti | nickness | T>5mm ±5mm; f | or D<406,4m nax ±2mm | m: ±10% and | EN 10219-2:2006 |
| | Straig | ality ghtness ass | 0,20% of tota | ≥100 must be al length and particular lei | 3mm/1m | |
| Yield strength | Nominal | thickness nm) | | Values | igins | |
| | > 16 | <u>≤</u> 16 40 | ReH min (MPa) 355 | | | |
| Tensile strength | Nominal | 40 thickness nm) | 345 | Values | | |
| | > | , | <i>R</i> m min (MPa) 470 | | (MPa) 30 | |
| Elongation | | thickness nm) | | Values | | |
| | > | <u>≤</u> 40 | min (%) 20 | | | |
| Impact strength | | thickness nm) | | Values | | EN 10219-1:2006 |
| | > | ≤ 40 | KV2Lmin (J) 27 at -20°C | | | |
| Weldability CEV | | thickness nm) | | Values | | |
| | > | <u>≤</u> max (%) 40 0,45 | | | | |
| Durability Nominal thickness Values (mm) | | | | | | |
| | > | <u>≤</u> 40 | - | max C : 0,24 Mn : 1,60 Si : 0,60 | c (%) P : 0,040 S : 0,040 | |

Date: 06.01. 2020



| | | | characteristic | | |
|-----|--|-----------------------------------|------------------|-----------------|------------------|
| | Declaration of | Performance | Tolerances on | | |
| | (according to regulation | | dimensions and | Outside | diamete |
| | (6 6 | , | shape | | nickness |
| | No. LO-015- | CPR2020-01-06 | | | oundnes |
| 1) | Code of the pro | oduct type: 1.0252 | Madd a transmith | | ghtness |
| | | steel tubes L235 according | Yield strength | | thicknes nm) |
| 2) | | 2002 + A1:2005 | | ،ر ح | iiiii) ≤ |
| | | | | | 16 |
| | Intended use or uses of the | | | 16 | 10 |
| | accordance with the application | | Tensile strength | - | thicknes |
| | specification, as foresee | | 0 | (r | nm) |
| | To be used in we | lded structures | | ~ | ĸ |
| 3) | | Ostrava a.s. | | 2,0 | 25,0 |
| | | ská 689/117 | Elongation | | thicknes |
| | | nčice - Czech Republic | | | nm) |
| | | 595 682 501 596 237 980 | | ≥ | <u>≤</u> |
| | Fax.+420 | 590 237 980 | Flattening test | 2,0 | 25,0 thicknes |
| | | | Flattening test | | nm) |
| | System of assessment and | | | , < | , |
| | performance o Syste | | | 2,0 | 25,0 |
| | | | Reaction to fire | Nominal | thicknes |
| Т | | formed by the manufacturer | | | nm) |
| | whereas LO a.s. performs ssessment, and evaluation of | | | ≥ | ≤ |
| d | | | | 2,0 | 25,0 |
| The | | identified in point 1 and 2 is in | Tightness | | thicknes |
| | conformity with the declared | I performance in the table. | | (r ≥ | nm) |
| - | This declaration of performar | ice is issued under the sole | | <u>∠</u> 2,0 | ≦ 25,0 |
| | | er identified in point 3. Signed | Dangerous | , | thicknes |
| | for and on behalf of the | ne manufacturer by: | substances | | nm) |
| | Dadim Svěabovaký | Michal Kolář | | ≥ | Í≤ |
| Q- | Radim Svěchovský Engineer – LO a.s. | Q/A manager – LO a.s. | | 2,0 | 25,0 |
| | 0 | 3 | Durability | Nominal | thicknes |
| ſ | M A | 1 | , | | nm) |
| l | hurd | | | | |
| | amad 5 . | 41 | | 2,0 | 25,0 |
| | 1 | 7 ~ | | | |

| Essential characteristic | | | Performance | | | Harmonised technical specification |
|-----------------------------|---------|-------------|----------------------|---------------|--------------|------------------------------------|
| Tolerances on | | | | Values | | |
| dimensions and | Outside | e diameter | +1% (| or min ±0,5 m | | |
| shape | | hickness | | 002 + A1:200 | | EN 10224:2002 + A1:2005 |
| | | oundness | | ax for D/T≤1 | | |
| | | ghtness | 27011 | 0,2% L | | |
| Yield strength | | I thickness | | Values | | |
| neia strength | | mm) | | Values | | |
| | > (- | | ReH min (MPa) | | | |
| | - | 16 | 235 | | | |
| | 16 | | 225 | | | |
| Tensile strength | | l thickness | 220 | Values | | |
| renshe strength | | mm) | | Values | | |
| | ≥ (. | | <i>R</i> m min (MPa) | max | (MPa) | |
| | 2.0 | 25,0 | 360 | | 00 | |
| Elongation | | I thickness | 500 | Values | 00 | |
| Liongation | | mm) | | | | |
| | ≥ | ≤ | long. min (%) | | min (%) | |
| | 2,0 | 25,0 | 25 | 2 | 23 | |
| Flattening test | Nomina | l thickness | | Test | | |
| | (1 | mm) | | | | |
| | > | ≤ | | | | |
| | 2,0 | 25,0 | | no cracks | | |
| Reaction to fire | Nomina | l thickness | Mandated cla | ass as per 96 | 6/303/EEC | EN 10224:2002 + A1:2005 |
| | (1 | mm) | | - | | EN 10224.2002 + A1.2003 |
| | ≥ | ≤ | | | | |
| | 2,0 | 25,0 | | Class A1 | | |
| Tightness | Nomina | I thickness | | Test | | |
| • | (1 | mm) | | | | |
| | ≥ | | Hydrostatic test | at a minimur | n of 7MPa/5s | |
| | 2,0 | 25,0 | or EMT in a | acc. with EN | 10246-1 | |
| Dangerous | Nomina | I thickness | | Values | | |
| substances | (1 | mm) | | | | |
| | ≥ | | Any dang. sub | stances in ex | cess of the | |
| | 2,0 | 25,0 | | ted levels sp | | |
| | - | - | relevant l | European sta | ndard | |
| Durability | Nomina | l thickness | | Values | | |
| | | mm) | | | | |
| | 2 | ≤ | | max | < (%) | |
| | 2,0 | 25,0 | | C : 0,18 | P:0,035 | |
| | | | | Mn : 1,30 | S : 0,030 | |
| | | | | Si : 0,40 | | |

Date : 06.01. 2020



Declaration of Performance (according to regulation EU No 305/2011) No. LO-016-CPR2020-01-06 1) Code of the product type: 1.0260 Type: Non-alloy seamless steel tubes L275 according 2) to EN 10224:2002 + A1:2005 Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer: To be used in welded structures 3) Liberty Ostrava a.s. Vratimovská 689/177 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980 System of assessment and verification of constancy of performance of the product: System 4 The initial type testing was performed by the manufacturer whereas LO a.s. performs permanent surveillance, assessment, and evaluation of factory production control. The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by: Radim Svěchovský Michal Kolář Q-Engineer – LO a.s. Q/A manager – LO a.s.

Date : 06.01. 2020

| Essential characteristic | | | Performance | Harmonised technical specification | |
|-----------------------------|---------|-----------|----------------------|---------------------------------------|-----------------------|
| Tolerances on | | | | Values | |
| dimensions and | Outside | diameter | | | |
| shape | | | | EN 10224:2002 + A1:20 | |
| | | oundness | | ax for D/T≤100 | |
| | | ghtness | 27011 | 0.2% L | |
| Yield strength | | thickness | | Values | |
| neia strength | | nm) | | Values | |
| | > ` | , | ReH min (MPa) | | 1 |
| | | 16 | 275 | | |
| | 16 | | 265 | | |
| Tensile strength | Nomina | thickness | | Values | - |
| i oliono oli oligili | | nm) | | | |
| | ≥ (| | <i>R</i> m min (MPa) | max (MPa) | |
| | 2.0 | 25,0 | 430 | 570 | - |
| Elongation | , - | thickness | | Values | - |
| | | nm) | | | |
| | | <u> </u> | long. min (%) | transv. min (%) | 1 |
| | 2.0 | 25.0 | 21 | 19 | - |
| Flattening test | | thickness | Test | | - |
| | | nm) | | | |
| | > ` | , ́≤ | | | |
| | 2.0 | 25.0 | | no cracks | - |
| Reaction to fire | 1- | thickness | | ass as per 96/303/EEC | EN 10224:2002 + A1:20 |
| | | nm) | | | EN 10224:2002 + A1:20 |
| | ≥ ` | , | | | - |
| | 2,0 | 25,0 | | Class A1 | |
| Tightness | Nomina | thickness | Test | | - |
| 0 | (1 | nm) | | | |
| | ≥ | | Hydrostatic test | at a minimum of 7MPa/5s | 5 |
| | 2,0 | 25,0 | or EMT in a | acc. with EN 10246-1 | |
| Dangerous | Nomina | thickness | Values | | - |
| substances | (1 | nm) | | | |
| | ≥ | <u> </u> | | stances in excess of the | |
| | 2,0 | 25,0 | max. permit | ted levels specified in | |
| | | | relevant | European standard | _ |
| Durability | | thickness | | Values | |
| | · · · | nm) | | | _ |
| | ≥ | ≤ | | max (%) | _ |
| | 2,0 | 25,0 | | C:0,22 P:0,035 | |
| | | | | Mn : 1,50 S : 0,030 | |
| | | | | Si : 0,45 | |



| | | | Essential characteristic | | |
|-----|---|---|--|-------------------|-------------|
| | Declaration of (according to regulation) | | Tolerances on dimensions and shape | | |
| | No. LO-017-0 | CPR2020-01-06 | Shape | Out of ro | ound |
| 1) | Code of the pro | duct type: 1.0419 | Yield strength | Straig Nominal | |
| • | Type: Non-alloy seamless | steel tubes L355 according | field strength | | nm) |
| 2) | | 2002 + A1:2005 | | > | |
| | Intended use or uses of the accordance with the applica specification, as foresee | ble harmonised technical | Tensile strengtl | | |
| | To be used in we | • | | · · · · · | nm) |
| 2) | | | | ≥ 2,0 | |
| 3) | Vratimov 719 00 Ostrava - Ku | Dstrava a.s. ská 689/117 nčice - Czech Republic | Elongation | Nominal (m | thic nm) |
| | | 595 682 501 596 237 980 | | ≥ 2,0 | |
| | System of assessment and v | | Flattening test | Nominal | thic nm) |
| | performance of | | | > | |
| | Syste | | | 2,0 | |
| Tł | ne initial type testing was per whereas LO a.s. performs | | Reaction to fire | | thic nm) |
| а | ssessment, and evaluation of | | | 2,0 | |
| The | performance of the product conformity with the declared | identified in point 1 and 2 is in performance in the table. | Tightness | Nominal | thic nm) |
| - | This declaration of norfarmon | ' | | ≥ | |
| | This declaration of performan | er identified in point 3. Signed | | 2,0 | |
| 100 | for and on behalf of th | | Dangerous substances | | thic nm) |
| | Radim Svěchovský | Micha Kolář | | ≥ 2,0 | |
| Q- | Engineer – LO a.s. | Q/A manager – LO a.s. | | 2,0 | |
| C | 0 0.1 | | Durability | | thic nm) |
| C | fridal !! | | | ≥ | |
| | | 4 h | | 2,0 | |

| Essential characteristic | | | Performance | | | Harmonised technical specification |
|---------------------------------------|---------|-------------|---------------------------------------|---------------|--------------|---------------------------------------|
| Tolerances on | | | | Values | | |
| dimensions and | Outside | e diameter | ±1% or min ±0,5 mm | | | |
| shape | | hickness | | 002 + A1:200 | | EN 10224:2002 + A1:2005 |
| onapo | | oundness | | ax for D/T≤1 | | EN 10224.2002 + A1.2003 |
| | | ghtness | 2 /0 11 | 0,2% L | 00 | |
| Yield strength | | I thickness | | Values | | |
| neid strengtn | | mm) | | values | | |
| | > | ≤ | ReH min (MPa) | | | |
| | | 16 | 355 | | | |
| | 16 | | 345 | | | |
| Tensile strength | Nomina | l thickness | | Values | | |
| J | (| mm) | | | | |
| | ≥ ` | , ́≤ | Rm min (MPa) | max | (MPa) | |
| | 2,0 | 25,0 | 500 | | 50 | |
| Elongation | Nomina | I thickness | | Values | | |
| U | (1 | mm) | | | | |
| | ≥ ` | Ĺ≤ | long. min (%) | transv. | min (%) | |
| | 2.0 | 25,0 | 21 | | 9 | |
| Flattening test | Nomina | I thickness | | Test | - | |
| · · · · · · · · · · · · · · · · · · · | | mm) | | | | |
| | > ` | Í ≤ | | | | |
| | 2.0 | 25.0 | | no cracks | | |
| Reaction to fire | Nomina | I thickness | Mandated cl | ass as per 96 | 5/303/EEC | |
| | | mm) | | | | EN 10224:2002 + A1:2005 |
| | ≥ (| | | | | |
| | 2.0 | 25.0 | _ | Class A1 | | |
| Tightness | ,- | I thickness | | Test | | |
| righthess | | mm) | | 1051 | | |
| | | | Hydrostatic test | at a minimur | m of 7MPa/5s | |
| | 2,0 | 25,0 | | acc. with EN | | |
| Dangerous | | I thickness | | Values | | |
| substances | | mm) | T aldeo | | | |
| ••••••• | ≥ (. | | Any dang. substances in excess of the | | | |
| | 2,0 | 25.0 | | ted levels sp | | |
| | 2,0 | 20,0 | relevant European standard | | | |
| Durability | Nomina | l thickness | Values | | | |
| , | | mm) | | 14400 | | |
| | | ≤ | | max | K (%) | |
| | 2,0 | 25,0 | - | C: 0,24 | P:0,035 | |
| | _,- | | | Mn : 1,70 | S : 0,030 | |
| | | | | Si : 0,60 | , | |

Date : 06.01. 2020



Declaration of Performance (according to regulation EU No 305/2011) No. LO-018-CPR2020-01-06 1) Code of the product type: 1.0252 Type: Non-alloy welded steel tubes L235 according to 2) EN 10224:2002 + A1:2005 Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer: To be used in welded structures 3) Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980 System of assessment and verification of constancy of performance of the product: System 4 The initial type testing was performed by the manufacturer whereas LO a.s. performs permanent surveillance, assessment, and evaluation of factory production control. The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by: Radim Svěchovský Michal Kolář Q-Engineer – LO a.s. Q/A manager – LO a.s. Date : 06.01. 2020

| Essential characteristic | | | Performance | | Harmonised technical specification | |
|-----------------------------|------------------|--------------------|---------------------------------------|---|---------------------------------------|--|
| Tolerances on | | | | Values | | |
| dimensions and | Outside | e diameter | ±0,75%, max ± 6,0 mm | | | |
| shape | Wall thickness | | | ±7.5% | | |
| • | | | 2% max for D/T< | 100, for D/T>100 must be | EN 10224:2002 + A1:2005 | |
| | Out of roundness | | | agreed | | |
| | Straightness | | | 0,2% L | | |
| Yield strength | | l thickness | | Values | | |
| neia sa engai | | nm) | | Values | | |
| | ,, | , | ReH min (MPa) | | | |
| | - | 16 | 235 | | | |
| | 16 | 10 | 235 | | | |
| Town the stress with | | | 220 | Malaaa | | |
| Tensile strength | | l thickness nm) | | Values | | |
| | ,, ≥ | , ≤ | <i>R</i> m min (MPa) | max (MPa) | | |
| | 2,0 | 25,0 | 360 | 500 | | |
| Elongation | | thickness | 500 | Values | | |
| Liongation | | nm) | | values | | |
| | ,, ≥ | | long. min (%) | transv. min (%) | | |
| | 2.0 | <u>≤</u> 25.0 | 25 | 23 | | |
| Bending | | thickness | 23 | Test | | |
| test | | nm) | | Test | | |
| 1631 | ,, > | , | | | | |
| | 2.0 | 25,0 | | no cracks | | |
| Reaction to fire | 1- | thickness | | ass as per 96/303/EEC | | |
| Reaction to me | | nm) | Wanualeu Cia | ass as per 50/505/EEC | EN 10224:2002 + A1:200 | |
| | ,, ≥ | ≤ | | | | |
| | 2,0 | <u>≤</u> 25.0 | _ | Class A1 | | |
| Tinktusse | , | 25,0 thickness | | | | |
| Tightness | | | | Test | | |
| | | nm) | | at a minimum of 7MDa/Fa | | |
| | 2 | ≤ | | at a minimum of 7MPa/5s | | |
| | 2,0 | 25,0 | OF EIVIT IN a | acc. with EN 10246-1 | | |
| Dangerous | | l thickness | | Values | | |
| substances | • | nm) | Any dang. substances in excess of the | | | |
| | 2 | ≤ | | stances in excess of the ted levels specified in | | |
| | 2,0 | 25,0 | | European standard | | |
| Durability | Nemina | l thickness | relevant | Values | | |
| Durability | | | | values | | |
| | () ≥ | nm) | | max (%) | | |
| | | | | | | |
| | 20 | | | | | |
| | 2,0 | 25,0 | | C: 0,18 P: 0,035 Mn: 1,30 S: 0,030 | | |



Declaration of Performance (according to regulation EU No 305/2011) No. LO-019-CPR2020-01-06 1) Code of the product type: 1.0260 Type: Non-alloy welded steel tubes L275 according to 2) EN 10224:2002 + A1:2005 Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer: To be used in welded structures 3) Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980 System of assessment and verification of constancy of performance of the product: System 4 The initial type testing was performed by the manufacturer whereas LO a.s. performs permanent surveillance, assessment, and evaluation of factory production control. The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by: Radim Svěchovský Michal Kolář Q-Engineer – LO a.s. Q/A manager - LO a.s.

Essential

characteristic specification Tolerances on Values dimensions and Outside diameter ±0.75%, max ± 6.0 mm shape Wall thickness ±7,5% EN 10224:2002 + A1:2005 2% max for D/T≤100, for D/T>100 must be Out of roundness agreed 0,2% L Straightness Yield strength Nominal thickness Values (mm) > ReH min (MPa) < 16 275 16 265 **Tensile strength** Nominal thickness Values (mm) N Rm min (MPa) max (MPa) ≤ 2.0 25.0 430 570 Nominal thickness Values Elongation (mm) transv. min (%) ≥ long. min (%) ≤ 2,0 25,0 21 19 Bending Nominal thickness Test (mm) test > ≤ 2.0 25.0 no cracks Nominal thickness Reaction to fire Mandated class as per 96/303/EEC EN 10224:2002 + A1:2005 (mm) N ≤ 2.0 25.0 Class A1 Tightness Nominal thickness Test (mm) Hydrostatic test at a minimum of 7MPa/5s ≥ ≤ or EMT in acc. with EN 10246-1 2.0 25,0 Dangerous Nominal thickness Values substances (mm)Any dang. substances in excess of the ≥ ≤ max, permitted levels specified in 2,0 25,0 relevant European standard Durability Nominal thickness Values (mm) ≥ max (%) \leq 2,0 25,0 C: 0,22 P:0.035 Mn : 1,50 S:0.030 Si:0,45

Performance

Harmonised technical

Date : 06.01. 2020



| | Declaration of Pe (according to regulation | |
|------------------|---|--|
| | No. LO-020-CF | PR2020-01-06 |
| 1) | Code of the produ | uct type: 1.0419 |
| 2) ^{Ty} | /pe: Non-alloy welded stee EN 10224:200 | el tubes L355 according to 12 + A1:2005 |
| acc | ended use or uses of the c ordance with the applicabl specification, as foreseen l | e harmonised technical |
| | To be used in weld | ed structures |
| 3) | Liberty Os Vratimovsk 719 00 Ostrava - Kund Tel: +420 59 Fax:+420 59 | á 689/117 šice - Czech Republic 95 682 501 |
| Syst | tem of assessment and ve performance of th System | ne product: |
| wh | itial type testing was perfo nereas LO a.s. performs pe ssment, and evaluation of f | ermanent surveillance, |
| | formance of the product id formity with the declared p | entified in point 1 and 2 is in erformance in the table. |
| | declaration of performance sibility of the manufacturer for and on behalf of the | identified in point 3. Signed |
| | adim Svěchovský ineer – LO a.s. | Michal Kolář Q/A manager – LO a.s. |
| Gri | saft. | fr |

Date : 06.01. 2020

| Essential characteristic | | | Performance | Harmonised technical specification | |
|-----------------------------|----------------|-----------|---------------------------------------|---------------------------------------|------------------------|
| Tolerances on | | | | Values | • |
| dimensions and | Outside | diameter | ±0,75%, max ± 6,0 mm | | |
| shape | Wall thickness | | | ±7,5% | |
| | | oundness | 2% max for D/T≤ | 100, for D/T>100 must be agreed | EN 10224:2002 + A1:200 |
| | | phtness | | 0.2% L | |
| Yield strength | | thickness | | Values | |
| noia on origin | | nm) | | Talabo | |
| | > | | ReH min (MPa) | | |
| | | 16 | 355 | | |
| | 16 | | 345 | | |
| Tensile strength | - | thickness | 040 | Values | |
| renalie arengen | | nm) | | Values | |
| | ≥ ` | , S | <i>R</i> m min (MPa) | max (MPa) | |
| | 2,0 | 25,0 | 500 | 650 | |
| Elongation | | thickness | | Values | |
| |) ≥ | nm) ≤ | long. min (%) | transv. min (%) | |
| | 2.0 | 25,0 | 21 | 19 | |
| Bending | 1- | thickness | 21 | Test | |
| test | | nm) | 1031 | | |
| | > | ≤ | | | |
| | 2.0 | 25.0 | | no cracks | |
| Reaction to fire | 1- | thickness | | ass as per 96/303/EEC | |
| | | nm) | | | EN 10224:2002 + A1:200 |
| | ≥ ` | , | | | |
| | 2.0 | 25,0 | | Class A1 | |
| Tightness | _,- | thickness | | Test | |
| rightiooo | | nm) | | | |
| | | , ≤ | Hydrostatic test | at a minimum of 7MPa/5s | |
| | 2.0 | 25,0 | | acc. with EN 10246-1 | |
| Dangerous | 1- | thickness | | Values | |
| substances | | nm) | | | |
| | ≥ ` | , | Any dang. substances in excess of the | | |
| | 2,0 | 25.0 | | ted levels specified in | |
| | , - | - , - | relevant l | European standard | |
| Durability | Nominal | thickness | | Values | |
| - | (r | nm) | | | |
| | ≥ | ٤ | | max (%) | |
| | 2,0 | 25,0 | 1 | C: 0,24 P: 0,035 | |
| | | | | Mn : 1,70 S : 0,030 | |
| | | | | Si : 0,60 | |



Declaration of Performance (according to regulation EU No 305/2011)

No. LO-021-CPR2020-01-06

1) Code of the product type: **1.0026**

2)

3)

Type: Non-alloy steel tubes S195T according to EN 10255:2004 + A1:2007

Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

To be used in welded structures

Liberty Ostrava a.s. Vratimovská 689/117 719 00 Ostrava - Kunčice - Czech Republic Tel: +420 595 682 501 Fax:+420 596 237 980

System of assessment and verification of constancy of performance of the product: System 3

The initial type testing was performed by notified test laboratory and manufacturer whereas the internal factory production control is under permanent surveillance and assessment of the manufacturer. In addition, the certification body No. 0045 TÜV NORD issued certificate of conformity with requirements acc. to DIN EN 10255:2004+A1:2007

The performance of the product identified in point 1 and 2 is in conformity with the declared performance in the table.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 3. Signed for and on behalf of the manufacturer by:

Radim Svěchovský Q-Engineer – LO a.s.

frid

Date : 06.01. 2020

| Essential characteristic | | | Performance | | | Harmonised technical specification |
|---------------------------------------|------------------|------------|--|--------------------------------|-------------|---------------------------------------|
| Tolerances on | | | | Values | | • |
| dimensions and | Outside | e diameter | EN 10255:2004 + A1:2007, Table 2 | | | |
| shape | | | | | , | EN 10255:2004 + A1:2007 |
| • | Out of roundness | | | Included in diameter tolerance | | |
| | | ghtness | | 0.002L | | |
| | Mass | | EN 10255:2 | 004 + A1:2007 | Table 2 | |
| Yield strength | | thickness | | Values | , | |
| ····· | (1 | nm) | | 141400 | | |
| | ≥ ` | , ́ ≤ | <i>R</i> eH min | | | |
| | | _ | (MPa) | | | |
| | 2,0 | 5.4 | 195 | | | |
| Tensile strength | , | thickness | | Values | | |
| · · · · · · · · · · · · · · · · · · · | | nm) | | | | |
| | ≥ ` | , | <i>R</i> m min | max (| MPa) | |
| | | _ | (MPa) | | , | |
| | 2,0 | 5,4 | 320 | 52 | 20 | |
| Elongation | Nomina | thickness | Values | | | |
| • | (1 | nm) | | | | |
| | ≥ . | | min (%) | | | |
| | 2,0 | 5,4 | 20 | | | |
| Reaction to fire | Nomina | thickness | Mand | ated class as p | ber | |
| | (1 | nm) | 96/303/EEC | | | |
| | ≥ ` | Ĺ | | | | EN 10255:2004 + A1:200 |
| | 2,0 | 5,4 | | Class A1 | | |
| Tightness | Nomina | thickness | Test | | | |
| U | (1 | nm) | | | | |
| | ≥ ` | Í≤ | Hydrostatic test at a minimum of 5MPa/5s | | | |
| | 2,0 | 5,4 | | acc. With EN 1 | | |
| Dangerous | Nomina | thickness | Values | | | |
| substances | (1 | nm) | | | | |
| | ≥ ` | , S | Any dang, su | bstances in ex | cess of the | |
| | 2,0 | 5,4 | max. permitted levels specified in | | | |
| | _,- | -,- | | European star | | |
| Durability | Nomina | thickness | | Values | | |
| - | (1 | nm) | | | | |
| | _ ≥ | Í≤ | | max | (%) | |
| | - | | | | | |
| | 2,0 | 5,4 | | C : 0,20 | P:0,035 | |