

SILENTLINE

Noise abatement laminated shims



Any mechanical assembly in working order generates vibrations that are source of harmful frequencies. As a solution to this critical drawback, LAMECO^{(1) + (2)} offers an innovative laminated product called SILENTLINE®. SILENTLINE® is a composite of metal and synthetic material, which has the key advantage of spreading the vibrational energy over a dramatically wider band (lower Q factor) - therefore dampening the transmission of potentially destructive harmful frequencies.

Advantages:

IMPROVED MECHANICAL CHARACTERISTICS

The mechanical characteristics of laminated shims are improved with this material. CETIM tested two probes, both in 0.08 inch / 2 mm thickness:

- The first one, of conventional form, entirely consisting of peelable metal foils: achieved Vickers value = 440 MPa
- The second one manufactured in the new material: achieved Vickers value = 510 MPa.

REDUCED WEAR AND TEAR

The SILENTLINE® laminated shims improve the operation of systems and machines which thus require less maintenance and are less subject to wear.

GREEN PRODUCT

- This product contributes to improvements of the working environment, of benefit to all users
- It makes it easier to achieve the demands of noise abatement legislation.

COMPETITIVE PRICE

The cost of SILENTLINE® laminated shims is virtually equivalent to that of shims made of other laminated Materials. So there is no economic obstacle to their use.

(1) SILENTLINE® - Trademark registered

(2) Europe: Patent No EP 0 667 233 B1

SILENTLINE

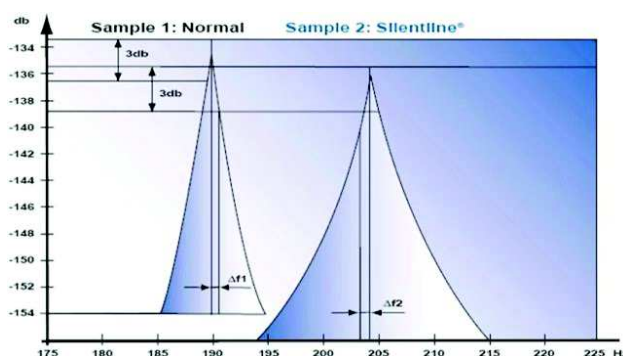
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Performances of SILENTLINE® laminated shims:

Tests carried out by CETIM on this new materiel show its capacity to tone down – in a spectacular way – the two consequences of a harmful frequency emission:

- Absorption or dampening and dispersion of 45 to 50 % of the **amplitude**;
- Reduction by 50 to 55 % of the **emission duration**.

This is therefore a high performance material.



Dimensions of SILENTLINE® products:

| Specification / Material | Specific weight | Thickness of laminations (mm / inch) | | | | | |
|--------------------------|------------------------|--------------------------------------|--------------|-------------|--------------|------------|---|
| | | Specification | | | | | |
| | | 0.010 / .0004 | 0.025 / .001 | 0.05 / .002 | 0.075 / .003 | 0.1 / .004 | |
| | | 2 | 6 | 7 | 8 | 9 | |
| Stainless steel | | | | | | | |
| SLS4 | Z 10CN 18.09/AISI 302 | 8.2 | | | X | X | X |
| SLS5 | Z 6CN 18.10/AISI 304 | 8.2 | X | X | X | X | X |
| SLS6 | Z 2CN 18.10/AISI 304L | 8.2 | | | X | X | X |
| SLS7 | AISI 316 | 8.2 | | | X | X | |
| SLS8 | Z 2CND 17.12/AISI 316L | 8.2 | | | X | X | X |
| Steel | | | | | | | |
| SLS9 | C1010 | 7.85 | | | X | | X |
| SLS23 | DC04 | 7.85 | | X | | | |



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