



# ESLIN PIPE SUPPORT EQUIPMENT INTRODUCTION

## Why this line of products?

When installing pipe or tube, the effects of vibration, shock, galvanic corrosion and unwanted noise are a major concern. Improperly clamped pipe or tube invite line failure and potential problems.

Esmat develops and fabricates solutions to combat these effects: Eslin special flexible pipe support equipment.

## Objectives

Our primary objective is to satisfy our customer's requirements for innovative, safe and cost-effective mountings designs, together with a "fit-for-purpose" solution.

## Material

The flexible pipe support material is made from a polyurethane-based compound or from a silicone-based compound, known as Eslin. Eslin is non-hydroscopic, rendering it suitable for low and high temperature applications, is impervious to the penetration of flammable liquids and is electrically safe.

## Stock

Most products we have in stock or we need only a short production time.

## Quality

Our products are manufactured using a Quality Management System and procedures that are accredited to ISO 9001 : 2000



*We would be delighted to  
advise you on your specific  
requirements*

Esmat Engineering bv  
Koperweg 17  
8251 KA, Dronten  
The Netherlands

Phone: +31 (0)321 33 88 45  
Fax: +31 (0)321 38 04 91  
info@esmat.net  
www.esmat.net



# ESLIN PIPE SUPPORT EQUIPMENT TRANSMISSIBILITY

## Dynamical properties

Dynamical properties of Eslin flexible pipe supporting depend on among others:

- \* compressive stress
- \* geometry of Eslin backing
- \* flexibility
- \* disturbing frequency
- \* temperature

Although dynamic analysis is a very complex one, some guidelines are applicable based upon a theoretical approach to single-degree-of-freedom vibration and noise problems.

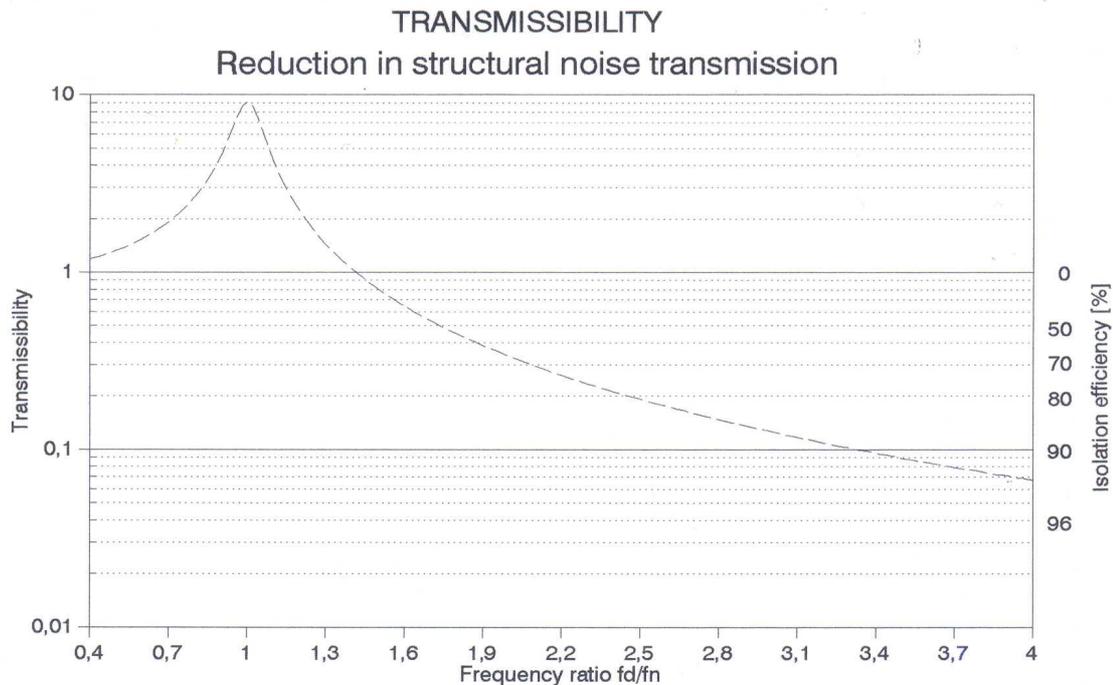
Best guidance is given by the transmissibility graph, regarding:

Transmissibility = transmissibility factor of the disturbing frequency

$f_d$  = disturbing frequency [Hz]

$f_n$  = natural frequency of Eslin [Hz]

Average damping ratio of 5.5 %, which gives a material loss factor of 0.11



## Application guidelines

Where the frequency ratio  $f_d/f_n$  exceeds 2.5, the isolation efficiency will be 80% or over.

At low disturbing frequency level, the  $f_d/f_n$  ratio must be larger than 2.5 in order to obtain a low natural frequency. Basically this results into a thick Eslin

At high disturbing frequency level a thinner Eslin layer will give a good result.

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