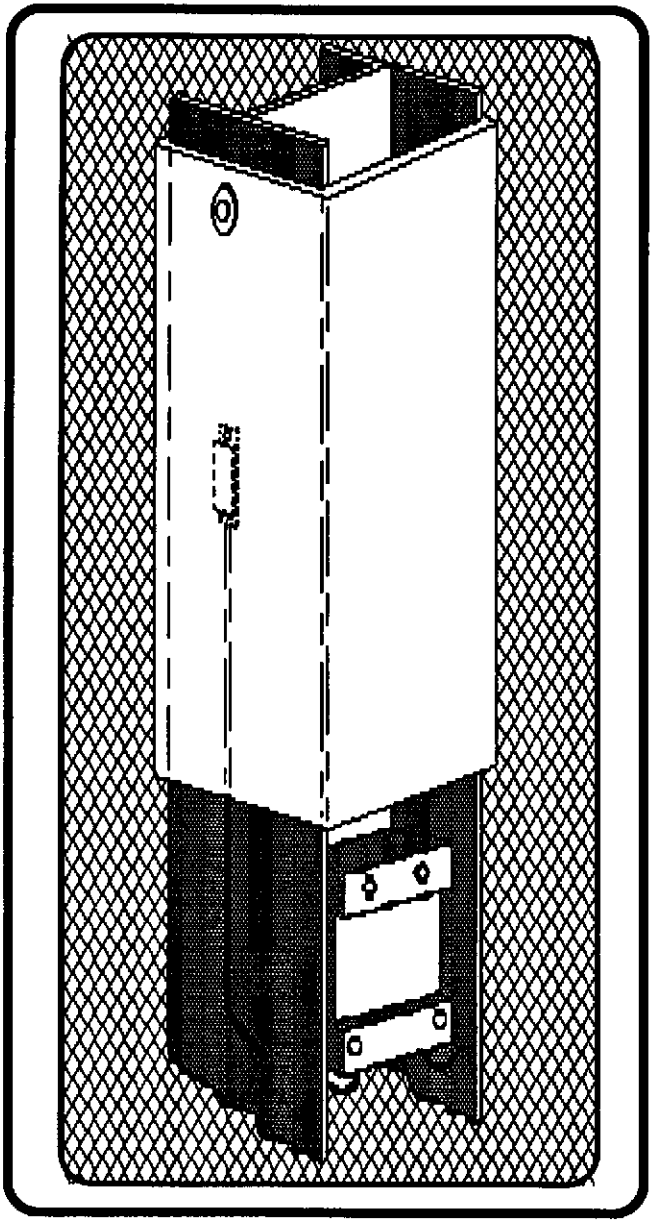
Kistler-Morse®

Microcell® Wrap Installation Manual



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Microcell Wrap Installation Manual

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97-1074-01
Rev. NEW
October 1989

INTRODUCTION

This manual describes the procedure for installing leg and brace wraps on a vessel's support members. Also included are the descriptions and part numbers of the leg and brace wraps available from Kistler-Morse and the hardware and installation kits needed to install them.

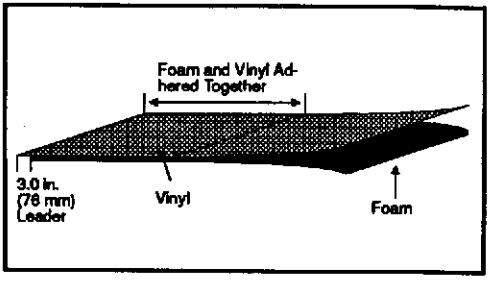

Figure 1. Illustration of Microcell Leg Wrap.

PURPOSE

The effects of the sun will have an impact on the performance of a bolt-on weight measurement system. The sun's radiation heats the steel legs and braces of a vessel unevenly, producing stresses in the support members that are unrelated to the weight of the vessel or material in the vessel. Microcell sensors react to the thermal expansions and contractions of the steel, resulting in readings that are corrupted by errors.

Microcell leg and brace wraps increase the accuracy of the sensor by reducing the sun's thermal effects on the leg or brace on which the sensor is installed. Insulate each critical support member with leg or brace wrap by following the instructions in this manual.

DESCRIPTION

Leg wrap consists of a vinyl outer sheet with a foam inner layer. (See Figure 1.) At one end of the wrap, the vinyl sheet is three inches (76 mm approx.) longer than the inner foam layer (referred to as a 3-inch vinyl leader). The vinyl and foam are even at the other three sides. Beginning at the 3-inch leader and for half the length of the wrap, the vinyl and foam are adhered together. The vinyl and foam are not adhered for the other half of the wrap.

One leg wrap is needed for each leg of the vessel that has a Microcell sensor. Leg wraps come in the two different sizes listed in Table 1.

One Wrap Hardware Kit is needed for each leg wrap purchased. This kit contains the hardware used to keep the leg wrap from slipping once it has been wrapped and stapled in place.

Note

The Wrap Hardware Kit is not needed with the brace wrap kits.

Brace wraps are a vinyl sheet without a foam inner layer. As many as four brace wraps may be needed for X-brace of the vessel. Brace wraps also come in two different sizes as listed in the table.

Only one Wrap Installation Kit is needed despite the number of leg or brace wraps purchased. This kit contains a heavy-duty stapler and staples used to install the leg and brace wraps around the support members.

The following table lists the contents of the different kits.

MODEL NO.	PART NO.	DESCRIPTION
Leg Wrap		
LW-1	38-2003-01	60" x 60" (1.5 m x 1.5 m) leg wrap is for up to 12-inch (300 mm) wide flange or 15-inch (375 mm) pipe leg. Covers sensors on one leg..
LW-2	38-2003-02	60" x 85" (1.5 m x 2.2 m) leg wrap is for 24-inch (610 mm) wide flange or 24-inch pipe leg. Covers sensor on one leg.
Brace Wrap		
BW-1	38-2004-01	20" x 120" (500 mm x 3 m) brace wrap is for up to 13-inch (325 mm) wrap perimeter. Covers sensor on one brace.
BW-2	38-2005-01	30" x 120" (760 mm x 3 m) brace wrap is for up to 23-inch (585 mm) wrap perimeter. Covers sensor on one brace.
Wrap Installation Kit (P/N 39-5000-01)		
	31-1011-01	Heavy-duty stapler
	31-1012-01	Box of staples
	97-1074-01	Microcell Wrap Installation Manual
Wrap Hardware Kit (P/N 39-5001-01)		
	30-8022-03	2 #8 zinc-plated washer

Table 1. Parts List.

30-7007-04

head screw

LEG WRAP INSTALLATION

Legs of vessels come in many different shapes, e.g. H-beam, pipe legs, angle iron. The examples shown in the following procedure depict H-beam legs, however, the procedure for installing leg wraps is the same for all the different types of legs.

1. Measure the circumference of the vessel's leg.

2. Lay the leg wrap on the ground or flat surface with the foam facing up.

3. Beginning at the 3-inch leader end of the wrap, measure and mark the foam to be 3/4 inch (19 mm) longer than the circumference measurement from Step 1.

4. Cut the foam (NOT THE VINYL) where marked.

5. Cut the vinyl three inches (76 mm) longer than the foam.

6. Beginning at the corner of the leg (Figure 2), wrap the leg wrap around the leg so that the 3-inch vinyl leader at each end meet.

Note
Reposition the junction box if it is covered by the leg wrap when the wrap is installed as described in Step 6.

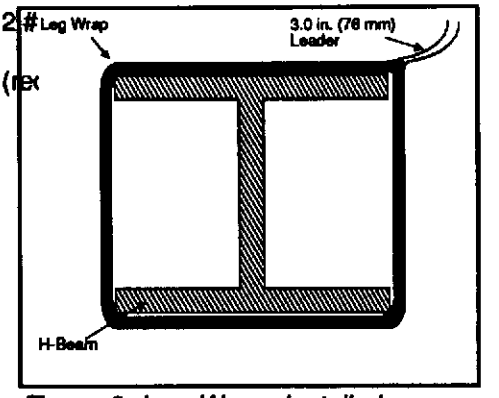

Figure 2. Leg Wrap Installed on an H-Beam Leg.

7.

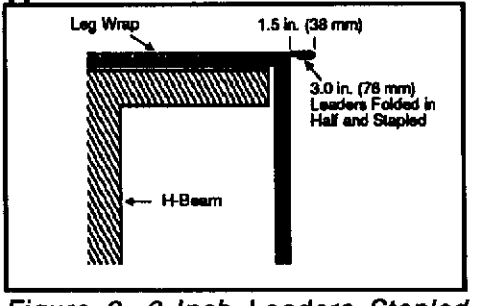

Figure 3. 3-Inch Leaders Stapled Together.

Fold the vinyl leaders together (Figure 3) and staple them approximately every four inches (100 mm approx.) the full length of the leg wrap.

8. Position the leg wrap on the leg so that the Microcell sensor is centered in the middle of the wrap (Figure 4).

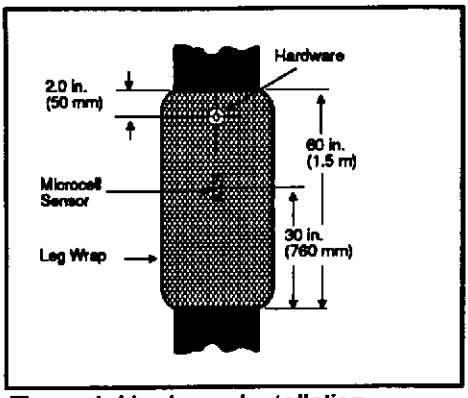

Figure 4. Hardware Installation.

9. Drill and tap two holes on opposite sides of the leg, horizontally centered, two inches (50 mm approx.) down from the top of the wrap.

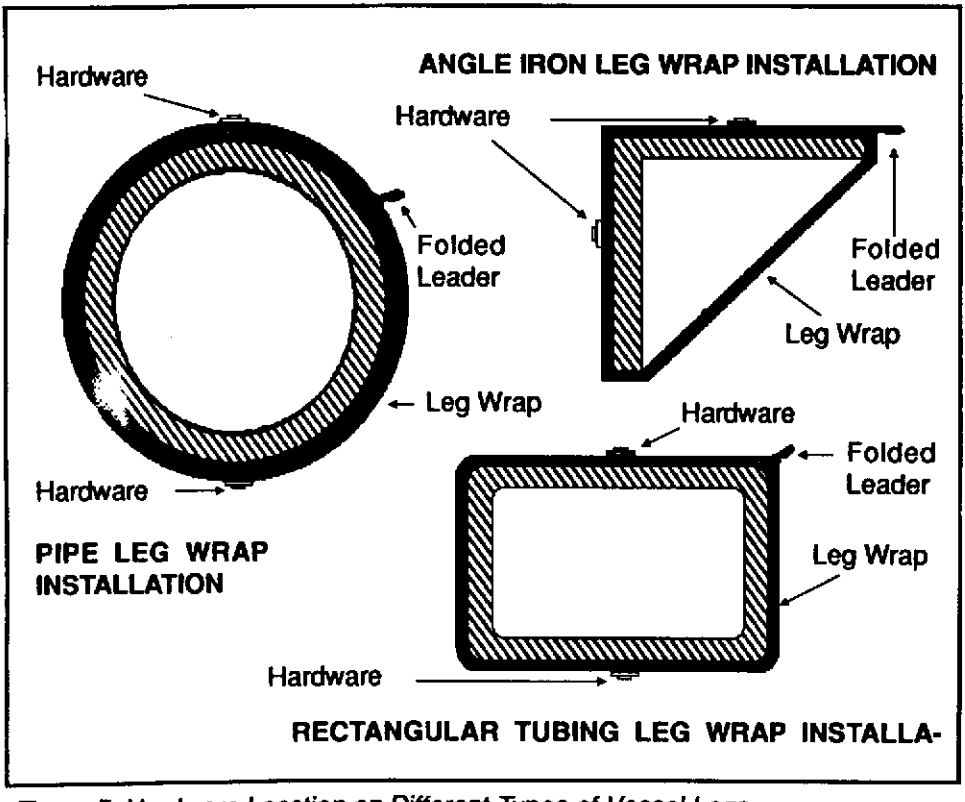

Figure 5. Hardware Location on Different Types of Vessel Legs.

Install the two screws and washers from the hardware kit in the tapped holes.

Figure 5 illustrates different types of legs and the location of the hardware once the wrap has been stapled in place.

BRACE WRAP INSTALLATION

Brace wrap is a vinyl sheet that does not have a foam inner layer like the leg wrap. It is long and narrow and used to wrap the critical X-braces supporting the legs of vessels. Like the legs of vessels, X-braces come in different shapes, e.g. angle iron, channel iron, rod brace. The examples shown in the following procedure depict angle iron braces, however, the procedure for installing brace wrap is the same for all the different types of braces.

1. Measure the brace between point 'A' and point 'B' shown in Figure 6.
2. Brace wrap is ten feet in length. If the distance between 'A' and 'B' is less than ten feet, cut the brace wrap the same dimension as length AB.
3. Wrap the width of the brace wrap around the brace (Figure 7).
4. Fold the two ends together and staple them every four inches (100 mm) the full length of the wrap.

Note

If the brace wrap is wide enough, double it by folding the width in half. Wrap it around the brace, pinch the

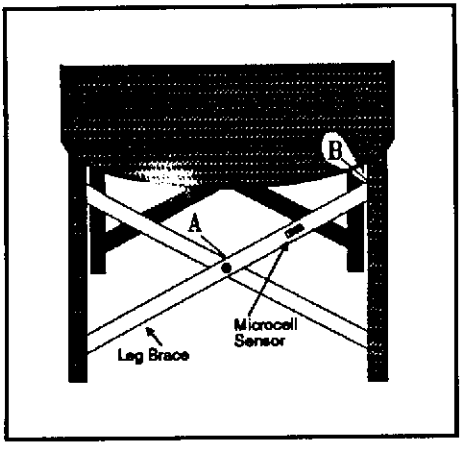

Figure 6. Brace Wrap Location.

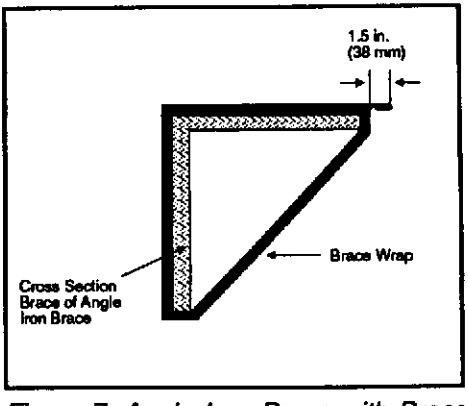

Figure 7. Angle Iron Brace with Brace Wrap.

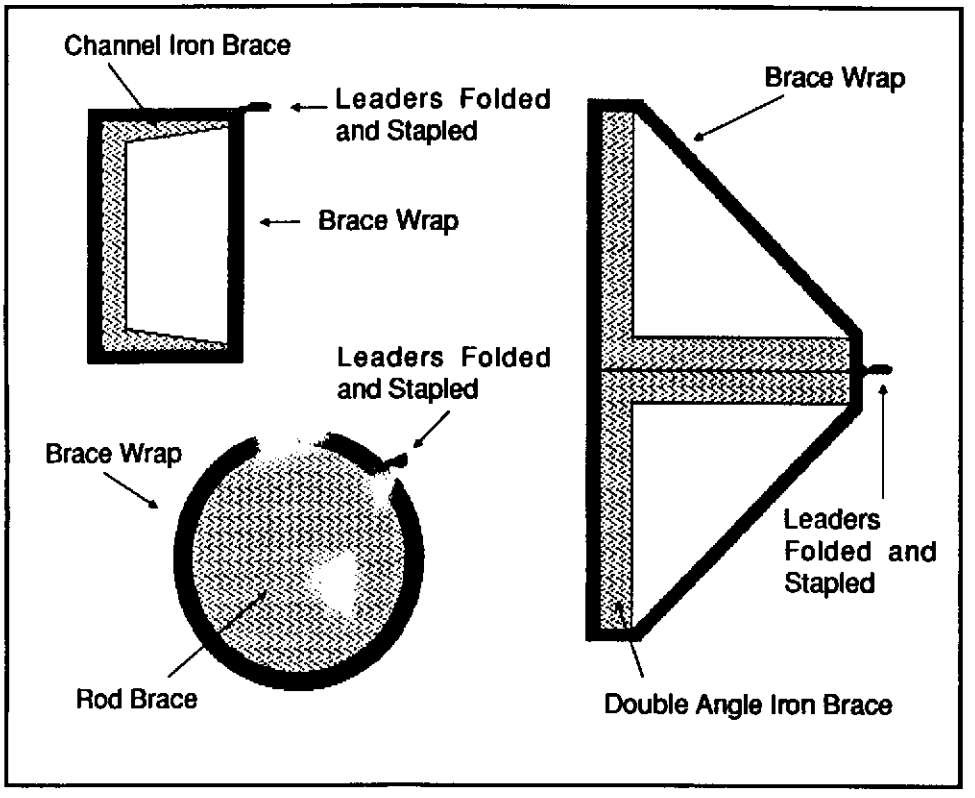

Figure 8. Cross Sections of Different Types of Vessel Support Braces.