INDUSTRY INFORMATION BULLETIN

To: **Commercial Roofing Industry**

Topic: **Recommendations for Rooftop Supports**

Date: **04/25/2014**

No: **1-14**

Industry Context

SPRI would like you to be aware that for surface mounted/non structurally integrated rooftop supports:

- Care should be taken when choosing surface mounted/non structurally integrated rooftop supports for pipe, equipment, PV panels, etc.

What to Consider...

Factors to consider when choosing a rooftop support include but are not limited to:

- Material Compatibility;
- Load Distribution;
- Thermal Movement; and
- Weathering/Durability.

Material Compatibility

The material compatibility of the roof membrane and rooftop support should be considered.

- If the support is a dissimilar material than the membrane, follow the membrane manufacturer's recommendations regarding separation of materials.
- The items being supported and the rooftop support system shall consist of components of the same kind of metal, or metal components shall be galvanically compatible metal pairs. Compatible metal pairs should have a designation of "None" or "Low" as found in *Chart 1: Dissimilar Metal Compatiblility.*
- Metals that are not of the same type should be separated to avoid galvanic reaction.

Load Distribution

The load distribution of the rooftop support should be considered.

- The compressive strength of the roof system and components such as insulation, cover board and membrane should always be taken into account prior to installation.
- The roof support imposed load should not exceed that as recommended by the roof system and component manufacturers.
- Support spacing should be as recommended by the roof support manufacturer.
- When supporting pipe or conduit the support spacing may be limited, please refer to MSS SP-58 or the National Electric Code (NEC) or other applicable codes or standards. Reduced spacing may be required to satisfy requirements of the roofing system or components.

Thermal Movement

Thermal movement, if not planned for, could cause damage to the roof membrane.

- Rooftop supports should accommodate thermal movement to the extent expected. (Rollers are one way to accommodate thermal movement)
- A protection/separation sheet "slip sheet" does not accommodate thermal movement under load.
- Care should be taken to ensure that the load is properly affixed or secured to the rooftop support.

Weathering/ Durability

Weathering and durability of rooftop supports:

- Materials used for rooftop supports should be appropriate for the geographical location of their application. Refer *to Chart 2: Material Durability & Weathering Performance Guide* for further guidance.
- As the service life of rooftop systems varies, the rooftop support used should be approved by the specifying engineer, consultant, or rooftop system manufacturer.

Chart 1: Dissimilar Metal Compatibility – Refer back to "Material Compatibility"

	Zinc	Galvanized Steel	Aluminum	Cast Iron	Lead	Mild Steel	Tin	Copper	Stainless Steel
Zinc	None	Low	Medium	High	High	High	High	High	High
Galvanized Steel	Low	None	Medium	Medium	Medium	High	High	High	High
Aluminum	Medium	Medium	None	Medium	Medium	Medium	Medium	High	High
Cast Iron	High	Medium	Medium	None	Low	Low	Low	Medium	Medium
Lead	High	Medium	Medium	Low	None	Low	Low	Medium	Medium
Mild Steel	High	High	Medium	Low	Low	None	Low	Medium	Medium
Tin	High	High	Medium	Low	Low	Low	None	Medium	Medium
Copper	High	High	High	Medium	Medium	Medium	Medium	None	Low
Stainless Steel	High	High	High	Medium	Medium	Medium	Medium	Low	None

None: *No Galvanic Reaction – Not dissimilar metals,* ***Low:*** *Galvanic reaction insignificant,* ***Medium:*** *Galvanic reaction may occur,* ***High:*** *Galvanic reaction will occur*

Chart 2: Rooftop Support Material Durability & Weathering Performance Guide

Rooftop Support Materials & Finishes	*Geographic Location*		
	Low Humidity and/or Atmospheric Impurities	*Moderate Humidity and/or Atmospheric Impurities*	*High Humidity or Aggressive Atmosphere*
Exposed wood (Treated pine/redwood/etc.)	**Not Recommended**	**Not Recommended**	**Not Recommended**
EPDM*	Better	Better	Better
High Density Polyethylene* (HDPE)	Better	Better	Better
Polypropylene*	Better	Better	Better
Nylon*	Better	Better	Better
PVC	Good	Good	Good
Electro Galvanized (EG)	Good	**Not Recommended**	**Not Recommended**
Hot Dip Galvanized (HD)	Better	Better	Good
Aluminum	Better	Better	Better
Stainless Steel	Best	Best	Best

*Results in the chart above are based on the assumption that these materials have an added UV stabilizer to assist with weathering and durability.