Claims:

What is claimed is:

1. An elongated member handling system, comprising:

one or more elongated members, each elongated member comprising a first end and a second end and a connector formed on or mechanically linked to the first end of each of the one or more elongated members, wherein each connector optionally comprises a cover coupled thereto;

a pulling assembly at least partially disposed about the one or more elongated members and adjacent the first end of each of the one or more elongated members, the pulling assembly moveably or fixedly coupled to an outer surface of each of the one or more elongated members, wherein the pulling assembly comprises a support skid configured to contact a surface upon which the pulling assembly is moved, and wherein the pulling assembly comprises a primary pulling anchor or, if present, the ~~optional~~ cover optionally comprises ~~a~~ the primary pulling anchor; and

a first jumper winch configured to be mechanically linked to the primary pulling anchor, wherein, when the first jumper winch is mechanically linked to the primary pulling anchor, the first jumper winch is configured to pull the pulling assembly from a first structure to a second structure; and

a second jumper winch configured to be mechanically linked to the second end of at least one of the one or more elongated members, wherein, when the second jumper winch is mechanically linked to the second end of the at least one of the one or more elongated members, the second jumper winch is configured to apply a tension to the second end of the at least one of the one or more elongated members.

2. The system of claim 1, further comprising a connection link having a first end coupled to the second structure, wherein the pulling assembly comprises a connection link anchor configured to engage with and mechanically link to a second end of the connection link.

3. The system of claim 2, wherein the second structure comprises a support element, and wherein, when the connection link anchor is mechanically linked to the second end of the connection link, the connection link is configured to engage with the support element to facilitate alignment of each connector with a corresponding connection interface located on the second structure.

4. The system of claim 2, wherein the second structure comprises a support element, wherein the support element and the connection link are configured to support the one or more elongated members when the pulling assembly is pulled into a position on the second structure and a tension applied thereto by the first jumper winch is released.

5. The system of claim 2, wherein the first end of the connection link is coupled to one or more slots defined by one or more base plates coupled to the second structure such that the first end of the connection link can move along a length of the one or more slots.

6. The system of claim 2, wherein the connection link comprises two rigid bodies coupled together, and wherein an articulated connection couples the two rigid bodies together.

7 The system of claim 1, wherein the support skid is configured to engage with a guide rail disposed on the second structure; and wherein the guide rail is configured to facilitate alignment of each connector with a corresponding connection interface located on the second structure when the pulling assembly is pulled into a position on the guide rail.

8. The system of claim 7, wherein:

the support skid is configured to fit at least partially around the guide rail, or

the guide rail comprises two opposing guide beams disposed along outer edges of the guide rail and the support skid is configured to fit between the two opposing guide beams.

9. The system of claim 1, wherein:

the system comprises two or more elongated members,

a spacer is disposed between and at least partially about the two or more elongated members to separate the elongated members by a distance, and

the spacer is located between the pulling assembly and the second ends of the two or more elongated members.

~~10. The system of claim 1, wherein the jumper winch is a first jumper winch, the handling system further comprising a second jumper winch configured to be mechanically linked to the second end of at least one of the one or more elongated members, and wherein, when the second jumper winch is mechanically linked to the second end of the at least one of the one or more~~

~~elongated members, the second jumper winch is configured to apply a tension to the second end of the at least one of the one or more elongated members.~~

10~~11~~. The system of claim 1, ~~wherein the jumper winch is a first jumper winch, the pulling assembly is a first pulling assembly, and the primary pulling anchor is a first primary pulling anchor, the handling system~~ further comprising a second pulling assembly ~~and a second jumper winch~~, wherein:

the second pulling assembly is at least partially disposed about the one or more elongated members and adjacent the second end of each of the one or more elongated members, the second pulling assembly moveably or fixedly coupled to an outer surface of each of the one or more elongated members, and wherein the second pulling assembly comprises a ~~second~~ primary pulling anchor, and

the second jumper winch is configured to be mechanically linked to the ~~second~~ primary pulling anchor of the second pulling assembly~~, and~~

~~when the second jumper winch is mechanically linked to the second primary pulling anchor, the second jumper winch is configured to apply a tension to the second end of the at least one of the one or more elongated members~~.

11~~12~~. The system of claim 1, further comprising one or more support surfaces disposed on the first structure, wherein each support surface is configured to support the one or more elongated members when the pulling assembly is pulled from the first structure to the second structure, and wherein each support surface comprises a moveable surface, a low friction surface, or a combination thereof.

12~~13~~. The system of claim ~~12~~11, wherein at least one support surface comprises the moveable surface, and wherein the moveable surface comprises a conveyor belt, a plurality of rollers, or a combination thereof.

13~~14~~. The system of claim ~~12~~11, wherein at least one support surface comprises the low friction surface, and wherein the low friction surface comprises polytetrafluoroethylene, an ultra-high molecular weight polyethylene, a matrix of a fabric reinforced polymer, a high density polyethylene, polyoxymethylene, or a combination thereof.

14~~15~~. The system of claim ~~12~~11, wherein:

the first structure comprises a vessel,

the vessel comprises a first vessel bending shoe and a second vessel bending shoe, and

at least one support surface is disposed on the vessel between the first vessel bending shoe and the second vessel bending shoe.

15~~16~~. An elongated member handling system, comprising:

one or more elongated members each elongated member comprising a first end and a second end and a connector formed on or mechanically linked to the first end of each of the one or more elongated members, wherein each connector comprises an optional cover coupled thereto;

a pulling assembly at least partially disposed about the one or more elongated members and adjacent the first end of each of the one or more elongated members, the pulling assembly moveably or fixedly coupled to an outer surface of each of the one or more elongated members, wherein the pulling assembly comprises a connection link anchor and a support skid, wherein the support skid is configured to contact a surface upon which the pulling assembly is moved, and wherein the pulling assembly comprises a primary pulling anchor or, if present, the ~~optional~~ cover optionally comprises ~~a~~ the primary pulling anchor;

a first jumper winch configured to be mechanically linked to the primary pulling anchor, wherein, when the first jumper winch is mechanically linked to the primary pulling anchor, the first jumper winch is configured to pull the pulling assembly from a first structure to a second structure;

a guide rail disposed on the second structure, wherein the support skid is configured to engage with the guide rail; and wherein the guide rail is configured to facilitate alignment of each connector with a corresponding connection interface located on the second structure when the pulling assembly is pulled into a position on the guide rail;

a connection link having a first end coupled to the second structure, wherein the connection link anchor is configured to engage with and mechanically link to a second end of the connection link when the pulling assembly is pulled into the position on the guide rail;

a second jumper winch configured to be mechanically linked to the second end of at least one of the one or more elongated members, wherein, when the second jumper winch is mechanically linked to the second end of the at least one of the one or more elongated members, the second jumper winch is configured to apply a tension to the second end of the at least one of the one or more elongated members; and

a support surface disposed on the first structure, wherein the support surface is configured to support the one or more elongated members when the pulling assembly is pulled from the first structure to the second structure, and wherein the support surface comprises a moveable surface, a low friction surface, or a combination thereof.

16~~17~~. A method for moving one or more elongated members from a first structure to a second structure, comprising:

mechanically linking a first jumper winch to a primary pulling anchor disposed on a pulling assembly or an optional cover, wherein:

the pulling assembly is at least partially disposed about the one or more elongated members and adjacent a first end of each of the one or more elongated members,

the pulling assembly is moveably or fixedly coupled to an outer surface of each of the one or more elongated members,

the pulling assembly comprises a support skid,

the support skid is configured to contact a surface upon which the pulling assembly is moved,

a connector is formed on or mechanically linked to the first end of each of the one or more elongated members, and

the optional cover, if present, is coupled to the connector;

mechanically linking a second jumper winch to the second end of at least one of the one or more elongated members;

pulling the pulling assembly from the first structure to the second structure with the jumper winch;

applying a tension to the second end of the at least one of the one or more elongated members with the second jumper winch when the pulling assembly is pulled from the first structure to the second structure with the first jumper winch;

aligning each connector with a corresponding connection interface located on the second structure; and

mechanically linking each connector to each corresponding connection interface located on the second structure.

17~~18~~. The method of claim ~~17~~16, wherein the pulling assembly further comprises a connection link anchor and the second structure further comprises a connection link having a

first end coupled to the second structure, the method further comprising mechanically linking a second end of the connection link to the connection link anchor once the pulling assembly is pulled from the first structure to the second structure.

18~~19~~. The method of claim ~~18~~17, wherein the second structure comprises a support element, and wherein the support element and the connection link are configured to support the one or more elongated members once the pulling assembly is pulled from the first structure to the second structure.

19~~20~~. The method of claim ~~17~~16, further comprising supporting the one or more elongated members on a moveable surface, a low friction surface, or a combination thereof located on the first structure when the pulling assembly is pulled from the first structure to the second structure.

21. The system of claim 2, wherein the connection link comprises two rigid bodies coupled together via a hinged connection, and wherein the first end of the connection link is moveably coupled to one or more slots defined by one or more base plates coupled to the second structure such that the first end of the connection link can move along a length of the one or more slots.

22. The system of claim 1, wherein the first jumper winch and the second jumper winch are configured to be mechanically linked at the same time to the primary pulling anchor and to the second end of the at least one of the one or more elongated members, respectively, and wherein, when the first jumper winch and the second jumper winch are mechanically linked to the primary pulling anchor and the at least one of the one or more elongated members, respectively, the first jumper winch and the second jumper winch are configured to simultaneously pull the pulling assembly and apply the tension, respectively.