

A CARRIER ASSEMBLY AND RELATED SYSTEMS AND METHODS

BACKGROUND

Field of the Disclosure

[0001] This disclosure generally pertains to abrasive blasting, with related apparatuses, methods, and systems, where the blasting may be wet, dry, or combinations thereof. More specifically, the disclosure relates to improved blast hose handling.

Background of the Disclosure

[0002] Abrasive blasting is the process of forcibly propelling a high pressure, high velocity stream of abrasive material against a surface to smooth a rough surface, roughen a smooth surface, shape a surface, or remove surface materials, such as contaminants, paint, etc. The stream of abrasive material may be wet or dry.

[0003] Figure 1 illustrates a typical abrasive blasting process (or system) 100. A process commonly known as sand-blasting (a form of dry media blasting) has been used for decades, to clean or otherwise prepare various types of structural surfaces. In this type of process 100, a supply of sand (or other types of particles, such as grit or the like) is mixed with a fast-moving stream of air, usually in a mixer or valve. The sand particulate becomes entrained in the air, and the resultant air-sand mixture 106 emerges at high speed from a nozzle 105 at the end of a blast hose 104. The mixture 106 is highly abrasive, and sand-blasting can be used to remove even strongly-adhered compounds (*e.g.*, paint, etc.) from various types of structural surfaces 108.

[0004] The discharge of the air-sand mixture 106 is hazardous for multiple reasons. First, particulate from the discharge, and as well as the blasted-surface, will linger in the air in the form of a cloud 107, making breathing difficult. As such, a breathing hood or suit 101 may be worn by an operator 102 (the suit 101 may be fed breathing air 103).

[0005] When blasting at high pressures (100 psi or more), the abrasive discharge can reach speeds in excess of 500 mph, which means a high amount of thrust (force) may impact and be felt by an operator upwards of 20 to 30 lbs. Generally speaking, an abrasive spray operation may require long periods of spraying, where the ongoing thrust force quickly results in fatigue. Human nature results in moving or otherwise holding the blast hose in as comfortable position as possible, even if it results in an unsafe position.

[0006] For example, the operator may bend the blast hose against his/her body and create a blast hose arc angles greater than 90 degrees, which may result in a hose wear point. If the hose wears through, the abrasive may injure the operator. Bending the hose creates another source of force on the arms and shoulders particularly with larger hoses used for larger nozzles. Another common occurrence from fatigue is where the operator increases abrasive flow to decrease air flow (increased friction) to reduce back thrust which leads to increased cost and waste. Fatigue and/or injury also result in decreased productivity.

[0007] Such a configuration may greatly reduce strain on hands and arms. There is a need in the art to allow a deadman assembly (or coupled device) to rotate on the hose. This may accomplish at least one or two advantages: first, the operator does not have to fight the hose. Imagine when one is trying to coil an extension cord or garden hose, one has to fight the cord / hose to achieve the coil.

[0008] The same type of thing happens with a blast hose upon movement. The hose may incur several bends or even a loop. When the blast hose is pulled it wants to straighten by rotation. If the hose does not rotate, the operator must hold the force of rotation adding to fatigue. The hose may be, for example, 1 ¼" or 1 ½" (common sizes) with a thick rubber wall. The second point relates to the first but also to safety. That is, during pressurization or with quick movement of the blast hose, the hose may quickly rotate, causing the operator to lose control of the deadman if the deadman is not allowed to rotate.

[0009] The operator may even lose control of the hose completely. In either case the blast hose is not under operator control and will be blasting abrasive until the system depressurizes. Could be 10 seconds with longer blast hoses. For example, in practice a one and one-half inch blast hose with a half inch nozzle at two hundred feet may take as long as 10-15 seconds for the supply pressure to dissipate down to a non-aggressive level. During this time the system is shutdown but an aggressive residual flow continues through the outlet nozzle.

SUMMARY

[0010] Embodiments of the disclosure pertain to a carrier assembly for engaging a hose or other comparable device or structure. The carrier assembly may include a mount or adapter comprising, which may have an inside mount surface, and an outside mount surface. The mount may have and a locking surface or platform configured with a lock tab receptacle. There may be a pliable member comprising a member body. The member body may have any of a member first end, a member second end, and a lock tab.

[0011] In use, the pliable member may be engaged on or with the locking surface. The lock tab may be inserted into the lock tab receptacle. Before, during, or after the pliable member is engaged with the locking surface, the first member end may be engaged to the member second end.

[0012] The carrier assembly may include a second pliable member, which may have any of a respective member body, a respective member first end, a respective member second end, and a respective lock tab.

[0013] In aspects, the mount may have a second locking surface with a respective lock tab receptacle. The second pliable member may be engaged with the locking surface. Before, during, or after engagement with the locking surface, the respective member first end may be engaged to the respective member second end.

[0014] The carrier assembly further may include a second mount having any of: a respective inside mount surface, a respective outside mount surface, and a respective slot or receptacle.

[0015] The pliable member may be engaged with the respective slot or receptacle.

[0016] The mount may have a guide rail. One or more auxiliary pieces of equipment (or the like) may be coupled with the guide rail, such as a deadman assembly. In such aspects, the deadman assembly may be operable in a multi-position, multi-function configuration comprising: a blast mode, a no-blast mode, and a no-blast, nozzle-vent mode. The deadman assembly comprises one of an electric or pneumatic power and control configuration.

[0017] The inside mount surface comprises may include an at least one mount rib. The pliable member may include a member inner surface. The member inner surface may include an at least one member rib. In aspects, any type of rib surface is for engaging the hose.

[0018] The carrier assembly may be configured to allow for freedom of rotational movement between the carrier assembly and the hose positioned therein, but prevent or mitigate longitudinal movement between the same.

[0019] Any component of the carrier assembly may include an at least one rib configured to allow for rotational movement of the hose therein, but prevent or mitigate longitudinal movement of the same.

[0020] The carrier assembly may be configured to impart suitable force against the hose such that longitudinal movement of the carrier assembly is prevented, but rotational movement of the carrier assembly around the hose is not prevented.

[0021] A first clamp is disposed around the pliable member. A second or other clamp may be disposed around the pliable member.

[0022] The mount outer surface may include a receptacle. The mount may include an alignment indicator in order to align for a securing member to engage the receptacle.

[0023] The carrier assembly may include a clip body having a clip extension engaged with the pliable member. The clip body may have a clip extension rib engaged with a grooved surface of the pliable member.

[0024] Other embodiments of the disclosure pertain to a carrier assembly that may include a mount. The mount may have an inside mount surface, and an outside mount surface. The assembly may have a pliable member. The pliable member may have a member body configured with a member first end, and a member second end.

[0025] The pliable member may be engaged on or with the outside mount surface. Before, during, or after being engaged on or with the outside mount surface, the first member end may be engaged to the member second end.

[0026] The mount may include a locking surface configured with a lock tab receptacle. The pliable member may include a lock tab. In the engaged position, the lock tab may be inserted into the lock tab receptacle.

[0027] In aspects, there may be a second pliable member comprising a respective member body; a respective member first end; a respective member second end; and a respective lock tab. As such, the mount may include a second locking surface with a respective lock tab receptacle.

[0028] The second pliable member may be in a respective engaged position with the second locking surface. As such, the respective member first end may be engaged to the respective member second end.

[0029] The carrier assembly may include a second mount. The second mount may include a respective inside mount surface, a respective outside mount surface, and/or a respective slot or receptacle.

[0030] Any mount may include a guide rail. There may be a deadman assembly coupled with the guide rail. For any (inside) mount surface, there may be an at least one mount rib. In a comparable manner, the pliable member may include a member inner surface. The member inner surface may include an at least one member rib.

[0031] Any mount may include an alignment indicator, which may be used to facilitate for a securing member to engage the lock receptacle.

[0032] Any assembly may include a clip body having a clip extension engaged with the pliable member. The clip body may have a clip extension rib engaged with a grooved surface of the pliable member.

[0033] These and other embodiments, features and advantages will be apparent in the following detailed description and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0034] A full understanding of embodiments disclosed herein is obtained from the detailed description of the disclosure presented herein below, and the accompanying drawings, which are given by way of illustration only and are not intended to be limitative of the present embodiments, and wherein:

[0035] **Figure 1** shows a general side view of a conventional blasting system;

[0036] **Figure 2A** shows a process diagram view of an abrasive blasting system in a blast mode according to embodiments of the disclosure;

[0037] **Figure 2B** shows a close-up prospective side view of a carrier assembly for a blast hose according to embodiments of the disclosure;

[0038] **Figure 3A** shows a prospective side view of another embodiment of a carrier assembly according to embodiments of the disclosure;

[0039] **Figure 3B** shows a prospective side component breakout view of the assembly of Figure 3A according to embodiments of the disclosure;

[0040] **Figure 4A** shows an end side view of a mount used for a carrier assembly for a hose according to embodiments of the disclosure;

[0041] **Figure 4B** shows a downward view of an outer surface of the mount according to embodiments of the disclosure;

[0042] **Figure 4C** shows an isometric view of the inner surface of the mount according to embodiments of the disclosure;

[0043] **Figure 4D** shows a longitudinal side view of the mount according to embodiments of the disclosure;

[0044] **Figure 5A** shows an isometric view of a pliable member for coupling to a mount for a carrier assembly according to embodiments of the disclosure;

[0045] **Figure 5B** shows a longitudinal side view of the pliable member according to embodiments of the disclosure;

[0046] **Figure 5C** shows a downward view of a topside of the pliable member according to embodiments of the disclosure;

[0047] **Figure 5D** shows an upward view of a bottom of the pliable member according to embodiments of the disclosure;

[0048] **Figure 5E** shows a side end view of a member receptacle of the pliable member according to embodiments of the disclosure;

[0049] **Figure 6A** shows an isometric view of an unsecured carrier assembly used with a hose according to embodiments of the disclosure;

[0050] **Figure 6B** shows a longitudinal side view of a carrier assembly with a single pliable member according to embodiments of the disclosure;

[0051] **Figure 6C** shows a lateral cross-sectional view of the carrier assembly according to embodiments of the disclosure;

[0052] **Figure 6D** shows a lateral cross-sectional view of the carrier assembly engaged with a hose according to embodiments of the disclosure;

[0053] **Figure 7** shows a top side view of an alternative carrier assembly according to embodiments of the disclosure;

[0054] **Figure 8A** shows a lateral cross-sectional view of a secured carrier assembly used with a hose according to embodiments of the disclosure;

[0055] **Figure 8B** shows an isometric component view of a pliable member usable with a carrier assembly according to embodiments of the disclosure;

[0056] **Figure 8C** shows a longitudinal side view of clip usable with a carrier assembly according to embodiments of the disclosure;

[0057] **Figure 9A** shows a lateral cross-sectional view of a secured carrier assembly having an alternative clip according to embodiments of the disclosure; and

[0058] **Figure 9B** shows an isometric component view of the alternative clip of Figure 9A according to embodiments of the disclosure.

DETAILED DESCRIPTION

[0059] Regardless of whether presently claimed herein or in another application related to or from this application, herein disclosed are novel apparatuses, units, systems, and methods that pertain to hose-use operations such as abrasive blasting, details of which are described herein.

[0060] Embodiments of the present disclosure are described in detail with reference to the accompanying Figures. In the following discussion and in the claims, the terms “including” and “comprising” are used in an open-ended fashion, such as to mean, for example, “including, but not limited to...”. While the disclosure may be described with reference to relevant apparatuses, systems, and methods, it should be understood that the disclosure is not limited to the specific embodiments shown or described. Rather, one skilled in the art will appreciate that a variety of configurations may be implemented in accordance with embodiments herein.

[0061] Although not necessary, like elements in the various figures may be denoted by like reference numerals for consistency and ease of understanding. Numerous specific details are set forth in order to provide a more thorough understanding of the disclosure; however, it will be apparent to one of ordinary skill in the art that the embodiments disclosed herein may be practiced without these specific details. In other instances, well-known features have not been described in detail to avoid unnecessarily complicating the description. Directional terms, such as “above,” “below,” “upper,” “lower,” “front,” “back,” etc., are used for convenience and to refer to general direction and/or orientation, and are only intended for illustrative purposes only, and not to limit the disclosure.

[0062] Connection(s), couplings, or other forms of contact between parts, components, and so forth may include conventional items, such as lubricant, additional sealing materials, such as a gasket between flanges, PTFE between threads, and the like. Various equipment may be in fluid communication directly or indirectly with other equipment. Fluid communication may occur via one or more transfer lines and respective connectors, couplings, valving, piping, and so forth. Fluid movers, such as pumps, may be utilized as would be apparent to one of skill in the art.

[0063] Numerical ranges in this disclosure may be approximate, and thus may include values outside of the range unless otherwise indicated. Numerical ranges include all values from and including the expressed lower and the upper values, in increments of smaller units. As an example, if a compositional, physical or other property, such as, for example, molecular weight, viscosity, melt index, etc., is from 100 to 1,000, it is intended that all individual values, such as 100, 101, 102, etc., and sub ranges, such as 100 to 144, 155 to 170, 197 to 200, etc., are expressly enumerated. It is intended that decimals or fractions thereof be included. For ranges containing values which are less than one or containing fractional numbers greater than one (*e.g.*, 1.1, 1.5, etc.), smaller units may be considered to be 0.0001, 0.001, 0.01, 0.1, etc. as appropriate. These are only examples of what is specifically intended, and all possible combinations of numerical values between the lowest value and the highest value enumerated, are to be considered to be expressly stated in this disclosure. Numerical ranges are provided within this disclosure for, among other things, the relative amount of reactants, surfactants, catalysts, etc. by itself or in a mixture or mass, and various temperature and other process parameters.

[0064] Without limitation otherwise, the make and manufacture of any particular component, subcomponent, etc., described herein may be as would be apparent to one of skill in the art, such as molding, forming, press extrusion, machining, additive manufacturing, etc.

Components, subcomponents, etc. may be metallic, plastic, composite, and so forth, and need not all be of the same material. Embodiments of the disclosure provide for one or more components to be new, used, and/or retrofitted to existing machines and systems.

[0065] For any embodiment of the disclosure, associated or auxiliary equipment including automation, controllers, piping, hosing, valves, wiring, nozzles, pumps, gearing, tanks, etc. may be shown only in part, or may not be shown or described, as one of skill in the art would have an understanding of coupling the components for operation thereof. Any component herein that utilizes power or automation may be provided with wiring, tubing, piping, etc. in order to be operable.

Terms

[0066] The term “connected” as used herein may refer to a connection between a respective component (or subcomponent) and another component (or another subcomponent), which may be fixed, movable, direct, indirect, and analogous to engaged, coupled, disposed, etc., and may be by screw, nut/bolt, weld, and so forth. Any use of any form of the terms “connect”, “engage”, “couple”, “attach”, “mount”, etc. or any other term describing an interaction between elements is not meant to limit the interaction to direct interaction between the elements and may also include indirect interaction between the elements described.

[0067] The term “pipe”, “conduit”, “line”, “tubular”, “hose”, or the like as used herein may refer to any fluid transmission means, and may (but need not) be tubular in nature. The term may also apply to other forms of transmission, such as electrical.

[0068] The term “composition” or “composition of matter” as used herein may refer to one or more ingredients, components, constituents, etc. that make up a material (or material of construction). Composition may refer to a flow stream of one or more chemical components.

[0069] The term “utility fluid” as used herein may refer to a fluid used in connection with the operation of an abrasive blasting device, such as a grit (sand), air, or water. The utility fluid may be for blasting, heating, cooling, or other type of utility. ‘Utility fluid’ may also be referred to and interchangeable with ‘service fluid’ or comparable.

[0070] The term “mounted” as used herein may refer to a connection between a respective component (or subcomponent) and another component (or another subcomponent), which may be fixed, movable, direct, indirect, and analogous to engaged, coupled, disposed, etc., and may be by screw, nut/bolt, weld, and so forth.

[0071] The term “non-emergency release” as used herein may refer to a voluntary release of a trigger/level mechanism of a deadman assembly in order to accomplish some other task, such as a break for shift change, a meal, or visit to a restroom, or to reposition for blasting a new area.

[0072] The term “deadman” as used herein may refer to an operable system or assembly utilizing some form of switch or comparable mechanism that, upon release of the ‘deadman’, results in shutdown. With respect to a blasting operation, release of the deadman may refer to a shutdown of media transfer through a blast line.

[0073] The term “machined” may refer to a computer numerical control (CNC) process whereby a robot or machinist runs computer-operated equipment to create machine parts, tools and the like.

[0074] Referring now to Figures 2A and 2B together, a process diagram view of an abrasive blasting system in a blast mode and a close-up prospective side view of a carrier assembly for a blast hose, respectively, illustrative of embodiments disclosed herein, are shown.

[0075] Figures 2A and 2B illustrate an embodiment of the abrasive blasting process (or system) 200, for which a supply of media (sand or other types of particles, such as grit or the like) 214 may be mixed with a fast-moving fluid stream 212, usually in a mixer or valve 210. Although described by way of example as air, the fluid stream 212 may be other materials, such as water and the like. The media 214 may be entrained in the fluid 212, and the resultant fluid-media mixture 206 emerges at high speed from a nozzle 205 at the end of a blast hose 204. The mixture 206 may be highly abrasive, and the blast 206 may remove even strongly-adhered compounds (*e.g.*, paint, etc.) from a structural surface(s) 208.

[0076] The discharge blast (such as of an air-sand mixture) 206 may be hazardous for multiple reasons. First, particulate from the discharge, and as well as the blasted-surface, may linger in the air in the form of a cloud 207, making breathing difficult. As such, a breathing hood or suit 201 may be worn by an operator 202 (the suit 201 may be fed breathing air 203). However, the suit 201 does not provide for easy handling of the hose 204. As such, the operator 202 may utilize a carrier assembly 211.

[0077] The carrier assembly 211 may be an elongated tubular-type structure configured for mounting on and/or around the hose 204. The assembly 211 may have a casing (body) 250, which may have one or more integral or coupled subcomponents. The assembly 211 may have a ‘clamshell’ configuration suitable for closing around the hose 204. Although not necessary, the carrier assembly 211 may be mounted proximate to the nozzle 205 (and/or nozzle holder), as this positioning may give the operator 202 optimal control. The clamshell configuration may be

created by lining up tabs on one part of the body 250 into slots into another part of the body, and creating a hinge point.

[0078] The carrier assembly 211 may have one or more associated components coupled therewith, such as a deadman assembly 215 and a secondary handle 251. Thus, the operator 202 need not hold the hose 204 directly, but instead may grasp the secondary handle 251, as well as the trigger 240/deadman handle 242 of the deadman assembly 215, thereby satisfying any “2 hands on” requirement. The deadman assembly 215 may be operable via wiring (or hose or other suitable mechanism) 219 and other related equipment not viewable here.

[0079] The deadman assembly 215 may have a simple blast/no-blast configuration that may entail the trigger released or trigger squeezed; however, the deadman assembly 215 is not meant to be limited, and may have one or more other configurations or features, such as being modular, electric, pneumatic, single-function, multi-function, utilize an actuator, and require reduced force to activate. The deadman assembly may be as that of any embodiment in pending U.S. non-provisional application Ser. No. 17/241,466, filed April 27, 2021, incorporated herein by reference in its entirety for all purposes.

[0080] The assembly 211 may have a thrust management system 295 coupled therewith. The thrust management system may include the pad mount coupled with a pad via a coupler 255. The pad mount may be hard or rigid, whereas the pad may be soft or pliable. The coupler 255 may be flexible, and thus accommodate bending moments during a spray or blast operation.

[0081] The thrust management system 295 may be adept at shifting load or thrust from high pressure operations felt by the operator in a blast axis (or vector) by displacing onto a thrust axis.

[0082] Referring now to Figures 3A and 3B together, a prospective side view of another embodiment of a carrier assembly for a hose and a prospective side component breakout view of the assembly of Figure 3A, respectively, illustrative of embodiments disclosed herein, are shown.

[0083] Figures 3A and 3B show a carrier assembly 311, which may be suitable for use with an abrasive blasting hose, or alternatively, any other kind of line or hose where a user may desire or wish for control and easy use. The assembly 311 may be like that of others disclosed herein, with differences appreciable to one of ordinary skill in the art.

[0084] Although not limited to any particular shape, the carrier assembly 311 may be useful for times where a quick, yet robust, coupling with a blast hose 304 may be desired. The assembly 311 may be tubular in nature to allow for the hose 304 to fit therein. That said, the shape of the carrier assembly 311 is not limited to those shown, and other shapes and configurations are within the scope of the disclosure. The hose 304 may be associated with a (discharge) nozzle 305.

[0085] The assembly 311 in a simplified form may be contemplated as a mount or bracket (or body) 350 having one or more straps or restraining members 343 coupled therewith. The restraining member 343 may be pliable in nature, and thus having some amount of flexibility and bend, without breaking (in contrast to something that might be deemed 'rigid'), as would be understood to one of ordinary skill in the art. The member 343 may be referred to as a pliable member.

[0086] In certain embodiments, such as shown in Figure 3B, the assembly 311 may include a first mount 350a and a second mount 350b, each coupled together with the one or more restraining members 343. Any mount 350 may have a guide rail 374. The guide rail 374 may be an elongated slot-type structure disposed or otherwise formed along an outer mount surface 385 for the length thereof; however, the guide rail 374 need not extend the full length, and may be partial in length along the outer surface 385. It is within the scope of the disclosure that there may be other rails (not viewable here) to accommodate other positions and configurations for accessories to couple with the assembly 311.

[0087] The rail 374 may be configured for one or more components to be coupled thereon (such as a thrust management system 295, Fig 2B). As illustrated, a deadman or deadman assembly 315 may be coupled with the rail 374. Although not limited, the deadman assembly 315 may have a trigger 340/handle (or body) 342 configuration that may provide a user the ability to hold the deadman 315 on an axis offset from that of the blast hose.

[0088] There may be a mount lock screw 371 (or bolt, knob, etc.) disposed therethrough (an end 369 of the lock screw 371 may be engageable against the rail 374). Thus, although not viewable here, the deadman 315 may have a (threaded) receptable for the end 369 to pass therethrough.

[0089] The end 369 may engage into a respective mount screw slot 362. The mount 350 may have one or more of the slots 362. To facilitate proper alignment of the end 369 and the respective slot 362, the mount 350 and the accessory (such as shown here, the deadman 315) may be made or configured with one or more respective tick or alignment marks 368, 367. That way a user will know when the accessory and the mount 350 have a proper alignment (see arrow A). Any accessory may attach with the rail, such as by sliding, snapping, fastening, etc.

[0090] The deadman assembly 315 may have an upper end 387 configured with a deadman rail slot 370, which may accommodate moving (sliding) engagement onto the guide rail 374. The position of the deadman 315 may be adjustable along the rail 374. Although not shown here, the deadman assembly 315 may operably coupled with peripheral equipment, such as a power source or control logic, via wiring connection point 319.

[0091] As mentioned, the carrier assembly 311 may be configured for engaging or disposing against a blast hose or other comparable piece of equipment. To do so, the user simply engages an inner mount surface 384 against the equipment surface, such as a hose outer surface 304a. The pliable member 343 may then be engaged with a mount member receptacle or platform 366, and then wrapping a first end 343a of the member 343 around the outer surface 304a back around to a second end 343b of the member 343.

[0092] In aspects, the first end 343a may be configured to engage and retain itself with or against the second end 343b. For example, the second end 343b may have a member receptacle 365 for the first end 343a to engage therein. The member 343 may have a friction or serrated surface 363 that facilitates the second end 343b holding thereagainst.

[0093] As mentioned, the inner surface 384 of the mount 350 may engage with the hose 304. To provide added support and grip, there may be one or more gripper surfaces or ribs 383 disposed on the inner surface 384. The ribs 383 may aid against wear and tear; just the same, the ribs 383 need not prevent (some) rotation of the hose 304, and thus may provide a measured freedom of movement.

[0094] To aid in rotation, but mitigate against slippage, the pliable member 343 may have one or more member ribs 344. The member rib 344 may have any desired shape, here shown as generally straight and longitudinal. Any rib 344 may have any amount of length; shown here by way of example, the rib 344 may extend from the first member end 343a to the second member end 343b.

[0095] An additional item of point may be the presence of an at least one lock tab 364. As shown, the lock tab 364 may be disposed on or proximate the second member end 343b. The lock tab 364 may be configured in size (length, width, protrusion, etc.) to engage or mate with a lock tab receptacle 361 disposed on the mount 350. In usage, the pliable member 343 may be tightened against the hose 304 in sufficient enough manner that the lock tab 364 may align with the lock tab receptacle 361, and fit therein.

[0096] The lock tab 364 (coupled) in the lock tab receptacle 361 may provide the pliable member(s) 343 and mount 350 rotate on the hose as one unit. In some instances when not coupled, the pliable member 343 and/or mount 350 may try to rotate separately and possibly “jam”, losing the ability for either to rotate on the hose 304. Same thing for aspects when the top mount 350b and/or clamps 345 might be used. The clamp(s) 345, which may include one on each side of the mount for each pliable member 343, may be useful to secure the mount 350, at the desired position, to the pliable members 343. This may facilitate the mount(s), the pliable member(s), and the clamp(s) to rotate as one.

[0097] As such, the one or more clamps 345 may be used to provide additional support on rotation of the mount 350 around the hose 340. The clamp 345 may have an open face configuration for disposing around the pliable member 343; once installed, the clamp 345 may be pinched or clamped together for a closed (face) configuration. The clamp 345 may be installed on either or both sides of the mount 350. To that end, any number of clamps 345 may be used with any number of pliable members 343, as may be desired. When the carrier assembly 311 is installed, one or more clamps 345 may abut against a surface or shoulder of the mount 350.

[0098] Referring now to Figures 4A, 4B, 4C, and 4D together, an end side view of a mount used for a carrier assembly for a hose, a downward view of an outer surface of the mount of Figure 4A, an isometric view of the inner surface of the mount of Figure 4A, and a longitudinal side view of the mount of Figure 4A, respectively, illustrative of embodiments disclosed herein, are shown.

[0099] Figures 4A-4D show a mount (or body, adapter, etc.) 450, which may be suitable for use with a carrier assembly for an abrasive blasting hose, or alternatively, any other kind of line or hose where a user may desire or wish for control and easy use. The mount 450 may be like that of others disclosed herein, with differences appreciable to one of ordinary skill in the art.

[0100] Although not limited to any particular shape, the mount 450 may be generally longitudinal and symmetrical in nature; thus, the shape of the mount 450 is not limited to those shown, and other shapes and configurations are within the scope of the disclosure.

[0101] The mount 450 may be an elongated body having an inner surface 484 and an outer surface 485. The inner (mount) surface 484 may have one or more rib members 483 disposed thereon. The outer (mount) surface 485 may also have various structural features, such as a (guide) rail 474. There may be a member platform or receptacle 466. The receptacle 466 (or respective platform surface 466a) may be external for a pliable member (343) to engage thereon and against, or may also be internal for the pliable member to fit therein.

[0102] The mount 450 (or guide rail 474) may have one or more respective mount screw slots 462, which may be configured for an external piece to engage thereagainst (such as a lock screw). To aid alignment of the slot 462 and the external piece, the outer surface 485 may have one or more alignment marks 468.

[0103] There may be one or more lock tab receptacles (*see, e.g.,* 361, 661, etc.). The location of the receptacle may aid engagement of the mount 450 with the pliable member (343) as may be desired. For example, the lock tab receptacle may be disposed on the outer surface 485. In some embodiments, the lock tab receptacle may be disposed on or within the platform surface 466a/receptacle 466.

[00104] Referring now to Figures 5A, 5B, 5C, 5D, and 5E together, an isometric view of a pliable member for coupling to a mount for a carrier assembly, a longitudinal side view of the pliable member of Figure 5A, a downward view of a topside of the pliable member of Figure 5A, an upward view of a bottom of the pliable member of Figure 5A, and a side end view of a member receptacle of the pliable member of Figure 5A, respectively, illustrative of embodiments disclosed herein, are shown.

[00105] Figures 5A-5E together show a pliable (strap) member 543, which may be suitable for use with any carrier assembly of the present disclosure or apparent variants. The member 543 may be like that of others disclosed herein, with differences appreciable to one of ordinary skill in the art.

[00106] The member 543 need not be limited to any particular shape; as shown here, the member 543 may be an elongated body having a first member end 543a and a second member end 543b. The member 543 may have a first or top member side, which may be configured with a friction-type surface, such as serrations or gratings 563. The friction surface 563 may be used to interact with a locking tooth or edge 546 disposed in a member receptacle 565 proximate the second member end 543b.

[00107] As one of skill would appreciate, the pliable nature of the member 543 facilitates bending the body so that the first end 543a may be directed into the receptacle 565. As grooves (or other comparable structure) pass by the tooth 546, the loop formed by the member becomes smaller, allowing for tightening. The tooth 546 may prevent the first end 543a from backing out of the receptacle 565, such that some other form of destruction (cutting, etc.) is needed to break or remove the member from any assembly or mount of the disclosure.

[00108] In embodiments, the receptacle 565 may be configured with a release mechanism that facilitates selective disengagement of the tooth 546 from the friction surface 563, such that breakage is not necessary or required for removal of the first end 543a from the second end 543b. The pliable member 543 may have other features or configurations like those described herein, such one or more lock tabs 564 and/or ribs 544.

[00109] Referring now to Figures 6A, 6B, 6C, and 6D together, an isometric view of an unsecured carrier assembly used with a hose, a longitudinal side view of a carrier assembly with a single pliable member, a lateral cross-sectional view of the carrier assembly of Figure 6B, and a lateral cross-sectional view of the carrier assembly of Figure 6B engaged with a hose, respectively, illustrative of embodiments disclosed herein, are shown.

[00110] Figures 6A-6D together show a carrier assembly 611, which may be suitable for use with an abrasive blasting hose, or alternatively, any other kind of line or hose where a user may desire

or wish for control and easy use. The assembly 611 may be like that of others disclosed herein, with differences appreciable to one of ordinary skill in the art.

[00111] The assembly 611 in a simplified form may be contemplated as a mount or bracket (or body) 650 having one or more pliable members or straps 643 coupled therewith. Although not shown here, another mount may be used with the assembly 611.

[00112] The mount 650 may be a generally elongated mount body with an outer mount surface (*e.g.*, 485) and an inner mount surface 684. The mount 650 may be configured for one or more components to be coupled thereon (such as a thrust management system 295, Fig 2A or a deadman assembly 315, Figure 3A).

[00113] As mentioned, the carrier assembly 611 may be configured for engaging or disposing against a blast hose 604 or other comparable piece of equipment. To do so, the user simply engages the inner mount surface 684 against the equipment surface 604a, such as a hose outer surface. The pliable member 643 may then be engaged with a mount member receptacle 666 and/or respective receptacle or platform surface 666a, and then wrapping a first end 643a of the member 643 around the outer surface 604a back around to a second end 643b of the member 643.

[00114] In aspects, the first end 643a may be configured to engage and retain itself with or against the second end 643b. For example, the second end 643b may have a member receptacle 665 for the first end 643a to engage therein. The member 643 may have a friction or serrated surface (*see* 363, Figure 3A) that facilitates the second end 643b holding thereagainst. For example, a (member) tooth or edge surface 646 may engage the member 643, as shown in Figure 6D.

[00115] To aid in rotation, but mitigate against slippage, the pliable member 643 may have one or more member ribs 644. The member rib 644 may have any desired shape, here shown as generally straight and longitudinal. Any rib 644 may have any amount of length; shown here by way of example, the rib 644 may extend from the first member end 643a to the second member end 643b.

[00116] An additional item of point may be the presence of an at least one lock tab 664. As shown, the lock tab 664 may be disposed on or proximate the second member end 643b. The lock tab 664 may be configured in size (length, width, protrusion, etc.) to engage or mate with a lock tab receptacle 661 disposed on the mount 650. In usage, the pliable member 643 may be tightened against the hose 604 in sufficient enough manner that the lock tab 664 may align with the lock tab receptacle 661, and fit therein, such as shown in Figures 6C and 6D. The carrier 611 may have a locked position L that includes the lock tab 664 engaged with the lock tab receptacle 661. Figure 6D shows a tightened position T whereby the first end 643a has now been inserted in and through the second end 643b (and its member receptacle 665). The tightened position T may include the tooth 646 engaged with the member 643 (or its friction surface).

[00117] Referring now to Figure 7 together, a top side view of an alternative carrier assembly, illustrative of embodiments disclosed herein, is shown. Figure 7 shows an alternative or variant carrier assembly 711, which may be suitable for use with an abrasive blasting hose, or alternatively, any other kind of line or hose where a user may desire or wish for control and easy use. The assembly 711 may be like that of others disclosed herein, with differences appreciable to one of ordinary skill in the art.

[00118] The assembly 711 in a simplified form may be contemplated as a mount or bracket (or body) 750 having one or more pliable members or straps 743 coupled therewith. Although not shown here, another mount may be used with the assembly 711.

[00119] The mount 750 may be a generally elongated mount body with an outer surface and an inner surface. The mount 750 may be configured for one or more components to be coupled or adjoined thereon, such as a deadman assembly 715. In embodiments, the assembly 715 may be at least partially integral with the mount 750.

[00120] As mentioned, the carrier assembly 711 may be configured for engaging or disposing against a blast hose or other comparable piece of equipment. To do so, the user simply engages the inner mount surface against the equipment surface, such as a hose outer surface. The pliable member 743 may then be engaged with a mount member receptacle and/or respective receptacle or platform surface 766a, and then wrapping a first end 743a of the member 743 around the target equipment back around to a second end 743b of the member 743.

[00121] In aspects, the first end 743a may be configured to engage and retain itself with or against the second end 743b. For example, the second end 743b may have a member receptacle (*e.g.*, 565, Figure 5B) for the first end 743a to engage therein. The member 743 may have a friction or serrated surface (*see* 563, Figure 5A) that facilitates the second end 743b holding thereagainst. For example, a tooth or edge surface (*e.g.*, 646) may engage the member 743 (*see* Figure 6D).

[00122] To aid in rotation, but mitigate against slippage, the pliable member 743 may have one or more member ribs 744. An additional item of point may be the presence of an at least one lock tab 764. As shown, the lock tab 764 may be disposed on or proximate the second member end 743b. The lock tab 764 may be configured in size (length, width, protrusion, etc.) to engage or mate with a lock tab receptacle 761 disposed on the mount 750. As shown here, there may be a plurality of lock tabs 764 and/or receptacles 761. In usage, the pliable member 743 may be tightened against and around the target piece in sufficient enough manner that the lock tab may align with the lock tab receptacle, and fit therein (*see* L, Figure 6C).

[00123] Referring now to Figures 8A, 8B, and 8C together, a lateral cross-sectional view of a secured carrier assembly used with a hose, an isometric component view of a pliable member

usable with a carrier assembly, and a longitudinal side view of a clip usable with a carrier assembly according, respectively, illustrative of embodiments disclosed herein, are shown.

[00124] Figures 8A-8C together show a carrier assembly 811, which may be suitable for use with an abrasive blasting hose 804, or alternatively, any other kind of line or hose where a user may desire or wish for control and easy use. The assembly 811 may be like that of others disclosed herein, with differences appreciable to one of ordinary skill in the art.

[00125] The assembly 811 may be contemplated as a mount or bracket (or body) 850 having one or more pliable members or straps 843 coupled therewith. As shown here, there may be one or more mounts 850.

[00126] The mount 850 may be a generally elongated mount body with an outer mount surface and an inner mount surface. Although not shown here, the mount 850 may be configured for one or more components to be coupled thereon (such as a thrust management system 295, Fig 2B or a deadman assembly 315, Figure 3A).

[00127] As mentioned, the carrier assembly 811 may be configured for engaging or disposing against the hose 804 or other comparable piece of equipment. To do so, the user simply engages the mount 850 against the equipment surface, such as a hose or equipment outer surface 804a. The pliable member 843 may then be engaged into or with a mount member receptacle 866 and/or respective receptacle or platform surface 866a, and then wrapping a first end of the member 843 around the outer surface 804a back around to a second end of the member 843.

[00128] In aspects, the member 843 may be configured to engage and retain itself with or against the second end, such as shown in Figure 8A. The member 843 may have a friction or serrated surface 863 that facilitates a gripping action. For example, a (member) tooth or edge surface 846 may engage the member 843.

[00129] To aid in securement, the assembly 811 may have a clip or clip plate 845a engaged with the body 850. The clip 845a may have one or more clip extensions 856 suitable for engagement (such as press-fit) into corresponding receptacles 866. As shown in Figure 8A, an outer clip extension surface 856b may engage against the pliable member 843. It may be the case alternatively or additionally that the extension 856 (our surface 856b) may have a clip extension rib 856a, which may engage against the pliable member 843. One of skill would appreciate the friction surface 863 may be a series of undulations or grooves (with corresponding crests/troughs), whereby the clip rib 856a may be configured to engage with any such feature of the surface 863 (such as trough 863a).

[00130] Although not necessary, the clip 845a and the mount 850 may have corresponding securing member receptacles 857a, 857b for a respective securing member (such as a screw, pin, etc.) 857 to mate and secure therein.

[00131] Referring now to Figures 9A and 9B together, a lateral cross-sectional view of a secured carrier assembly having an alternative clip, and an isometric component view of the alternative clip, respectively, illustrative of embodiments disclosed herein, are shown.

[00132] Figures 9A-9B together show a carrier assembly 911, which may be suitable for use with an abrasive blasting hose 904, or alternatively, any other kind of line or hose where a user may desire or wish for control and easy use. The assembly 911 may be like that of others disclosed herein, with differences appreciable to one of ordinary skill in the art.

[00133] The assembly 911 may be contemplated as a mount or bracket (or body) 950 having one or more pliable members or straps 943 coupled therewith. As shown here, there may be one or more mounts 950.

[00134] The carrier assembly 911 may be configured for engaging or disposing against the hose 904 or other comparable piece of equipment. To do so, the user simply engages the mount 950 against the equipment surface. The pliable member 943 may then be engaged into or with a mount member receptacle 966 and/or respective receptacle or platform surface (*see* 766a), and then wrapping a first end of the member 943 around the hose 904 back around to a second end of the member 943.

[00135] In aspects, the member 943 may be configured to engage and retain itself with or against the second end, such as shown in Figure 9A. The member 943 may have a friction or serrated surface 963 that facilitates a gripping action.

[00136] To aid in securement, the assembly 911 may have a clip or clip plate 945a engaged with the body 950. The clip 945a may have one or more clip extensions 956 suitable for engagement (such as press-fit) into corresponding receptacles 966. As shown in Figure 9A, an outer clip extension surface 956b may engage against the pliable member 943. It may be the case alternatively or additionally that the extension 956 (or surface 956b) may have a clip extension rib 956a, which may engage against the pliable member 943. One of skill would appreciate the friction surface 963 may be a series of undulations or grooves (with corresponding crests/troughs), whereby the rib 956a may be configured to engage with any such feature of the surface 963 (such as trough 963a).

[00137] A user may squeeze clip ends 945b, 945c together to facilitate insertion of the clip 945a into the receptacle 966. The clip 945a may also have a clip tooth 958 or other suitable surface

configured to engage the mount 950, which may help keep the clip 945a thereagainst. The mount 950 may have a corresponding clip tooth receptacle 958a to receive the clip tooth 958 therein.

[00138] Embodiments herein may provide for apparatuses, systems, methods of use and operation of one or more systems disclosed herein, comparable variants, and/or components thereof. Methods herein may refer to use and/or operation of an abrasive blasting operation that may utilize a deadman assembly, and may be synonymous with system (and thus used interchangeably). While referred to as pneumatic, other control mechanisms are possible, such as electrical. Any component here may be integral to another, regardless if not expressly shown in the Figures, and vice versa.

[00139] The method may include providing or arranging for one or more abrasive blasting components, such as a hose, blast pot, control valves, a deadman assembly, and so forth. The method may include use and/or operation of associated or auxiliary equipment including automation, controllers, piping, hosing, valves, wiring, nozzles, pumps, gearing, tanks, etc. may be shown only in part, or may not be shown or described, as one of skill in the art would have an understanding of coupling the components for operation thereof. All components of the method requiring power or automation may be provided with wiring, tubing, piping, etc. in order to be operable therefore.

[00140] The method may include use and/or operation of a deadman assembly that may be associated with a pneumatic flow control or comparable. The method may include operating the deadman assembly in any desired mode, such as a blast mode, a no-blast mode, a no-blast, nozzle vent mode, etc.

[00141] The method may include configuring the deadman assembly with one or more signal devices operable to send or transfer a signal to one or more downstream or associated devices, such as a control valve. The method may include coupling respective hosing to fittings associated with the deadman assembly, air source, regulator, control valves, and any other downstream equipment.

[00142] The method may include operating or moving a trigger of a deadman assembly to the blast mode. As such, the deadman assembly may allow a signal to now transfer to a desired device or destination.

[00143] The method may include releasing the deadman assembly to shut off. The method may include a deactivation response time of about one to two seconds or less.

[00144] The method may include the use of a carrier assembly, such as for holding a hose. The carrier assembly may include one or more of: a mount or body having an inner surface engaged

with the hose; there may be a guide rail disposed on the mount. There may be a deadman assembly coupled with the guide rail.

[00145] Embodiments of the present disclosure may pertain to a method of using or operating a high-pressure spray device that includes use of a thrust management system for a (pressurized) hose. The thrust management system may include one or more of a pad mount configured to couple with the hose; a pad backing comprising a pad backing extension. The pad mount may have a pad coupler extension.

[00146] In some embodiments, the hose or carrier is not associated with a deadman assembly. In other embodiments, the hose or carrier is associated with a deadman assembly.

[00147] While preferred embodiments of the disclosure have been shown and described, modifications thereof may be made by one skilled in the art without departing from the spirit and teachings of the disclosure. The embodiments described herein are exemplary only and are not intended to be limiting. Many variations and modifications of the embodiments disclosed herein are possible and are within the scope of the disclosure. Where numerical ranges or limitations are expressly stated, such express ranges or limitations should be understood to include iterative ranges or limitations of like magnitude falling within the expressly stated ranges or limitations. The use of the term "optionally" with respect to any element of a claim is intended to mean that the subject element is required, or alternatively, is not required. Both alternatives are intended to be within the scope of the claim. Use of broader terms such as comprises, includes, having, etc. should be understood to provide support for narrower terms such as consisting of, consisting essentially of, comprised substantially of, and the like.

[00148] Accordingly, the scope of protection is not limited by the description set out above but is only limited by the claims which follow, that scope including all equivalents of the subject matter of the claims. Each and every claim is incorporated into the specification as an embodiment of the present disclosure. Thus, the claims are a further description and are an addition to the preferred embodiments of the present disclosure. The inclusion or discussion of a reference is not an admission that it is prior art to the present disclosure, especially any reference that may have a publication date after the priority date of this application. The disclosures of all patents, patent applications, and publications cited herein are hereby incorporated by reference, to the extent they provide background knowledge; or exemplary, procedural or other details supplementary to those set forth herein.

CLAIMS

What is claimed is:

1. A carrier assembly for engaging a hose comprising:
a mount comprising: an inside mount surface, an outside mount surface;
a pliable member comprising a member body configured with a member first end, a member second end,
wherein the pliable member is in an engaged position on or with the mount, the first member end is engaged to the member second end.
2. The carrier assembly of claim 1, wherein the mount further comprises a locking surface configured with a lock tab receptacle, and the pliable member further comprises a lock tab.
3. The carrier assembly of claim 2, wherein in the engaged position, the lock tab is inserted into the lock tab receptacle.
4. The carrier assembly of claim 3, the carrier assembly further comprising: a second pliable member comprising a respective member body; a respective member first end; a respective member second end; and a respective lock tab,
wherein the mount comprises a second locking surface with a respective lock tab receptacle.
5. The carrier assembly of claim 4, wherein the second pliable member is in a respective engaged position with the second locking surface, and wherein the respective member first end is engaged to the respective member second end.
6. The carrier assembly of claim 3, the carrier assembly further comprising a second mount comprising: a respective inside mount surface, a respective outside mount surface, and a respective slot or receptacle.

7. The carrier assembly of claim 3, wherein the mount further comprises a guide rail, and wherein a deadman assembly is coupled with the guide rail.
8. The carrier assembly of claim 7, wherein the inside mount surface comprises an at least one mount rib.
9. The carrier assembly of claim 1, wherein the inside mount surface comprises an at least one mount rib, wherein the pliable member comprises a member inner surface, and wherein the member inner surface comprises an at least one member rib.
10. The carrier assembly of claim 9, wherein a first clamp is disposed around the pliable member.
11. The carrier assembly of claim 1, wherein the outside mount surface comprises a receptacle, and wherein the mount comprises an alignment indicator in order to facilitate for a securing member to engage the receptacle.
12. The carrier assembly of claim 1, the carrier assembly further comprising a clip body having a clip extension engaged with the pliable member.
13. The carrier assembly of claim 12, wherein the clip body has a clip extension rib engaged with a grooved surface of the pliable member.
14. A carrier assembly for engaging a hose comprising:
 - a mount comprising: an inside mount surface, an outside mount surface, and a locking surface configured with a lock tab receptacle;
 - a pliable member comprising a member body configured with a member first end, a member second end, and a lock tab,

wherein the pliable member is engaged on or with the locking surface, and the lock tab inserted into the lock tab receptacle, and

wherein the first member end is engaged to the member second end.

15. The carrier assembly of claim 14, the carrier assembly further comprising a second pliable member comprising a respective member body, a respective member first end, a respective member second end, and a respective lock tab.

16. The carrier assembly of claim 15, wherein the mount comprises a second locking surface with a respective lock tab receptacle, wherein the second pliable member is engaged with the locking surface, and wherein after being engaged with the locking surface, the respective member first end is engaged to the respective member second end.

17. The carrier assembly of claim 16, wherein the mount further comprises a guide rail, and wherein a deadman assembly is coupled with the guide rail.

18. The carrier assembly of claim 15, wherein the carrier assembly is configured to allow for freedom of rotational movement between the carrier assembly and the hose positioned therein, but prevent or mitigate longitudinal movement between the same.

19. A carrier assembly for engaging a hose comprising:

a mount comprising: an inside mount surface, an outside mount surface; and

a pliable member comprising a member body configured with a member first end, and a member second end,

wherein the pliable member is engaged on or with the outside mount surface, and

wherein after being engaged on or with the outside mount surface, the first member end is engaged to the member second end.

20. The carrier assembly of claim 19, the carrier assembly further comprising a deadman assembly is coupled with the guide rail.

21. A carrier assembly for engaging a hose comprising:

a mount or adapter comprising: an inside mount surface, an outside mount surface, and a locking surface configured with a lock tab receptacle;

a pliable member comprising a member body configured with a member first end, a member second end, and a lock tab,

wherein the pliable member is engaged on or with the locking surface, and the lock tab inserted into the lock tab receptacle, and

wherein the first member end is engaged to the member second end.

22. The carrier assembly of claim 21, the carrier assembly further comprising a second pliable member comprising a respective member body, a respective member first end, a respective member second end, and a respective lock tab,

wherein the mount comprises a second locking surface with a respective lock tab receptacle,

wherein the second pliable member is engaged with the locking surface, and

wherein after being engaged with the locking surface, the respective member first end is engaged to the respective member second end.

23. The carrier assembly of claim 22, the carrier assembly further comprising a second mount comprising: a respective inside mount surface, a respective outside mount surface, and a respective slot or receptacle.

24. The carrier assembly of claim 23, wherein the pliable member is engaged with the respective slot or receptacle.

25. The carrier assembly of claim 24, wherein the mount further comprises a guide rail, and wherein a deadman assembly is coupled with the guide rail.
26. The carrier assembly of claim 21, wherein the mount further comprises a guide rail, and wherein a deadman assembly is coupled with the guide rail.
27. The carrier assembly of claim 26, wherein the deadman assembly is operable in a multi-position, multi-function configuration comprising: a blast mode, a no-blast mode, and a no-blast, nozzle-vent mode, and wherein the deadman assembly comprises one of an electric or pneumatic power and control configuration.
28. The carrier assembly of claim 21, wherein the inside mount surface comprises an at least one mount rib.
29. The carrier assembly of claim 28, wherein the pliable member comprises a member inner surface, and wherein the member inner surface comprises an at least one member rib.
30. The carrier assembly of claim 29, wherein any type of rib surface is for engaging the hose.
31. The carrier assembly of claim 21, wherein the carrier assembly is configured to allow for freedom of rotational movement between the carrier assembly and the hose positioned therein, but prevent or mitigate longitudinal movement between the same.
32. The carrier assembly of claim 21, wherein any component of the carrier assembly comprises an at least one rib configured to allow for rotational movement of the hose therein, but prevent or mitigate longitudinal movement of the same.

33. The carrier assembly of claim 21, wherein the carrier assembly is configured to impart suitable force against the hose such that longitudinal movement of the carrier assembly is prevented or mitigated, but rotational movement of the carrier assembly around the hose is not prevented.
34. The carrier assembly of claim 21, wherein a first clamp is disposed around the pliable member.
35. The carrier assembly of claim 34, wherein a second clamp is disposed around the pliable member.
36. The carrier assembly of claim 21, wherein the mount outer surface comprises a locking receptacle, wherein the mount comprises an alignment indicator in order to align for a securing member to engage the locking receptacle.
37. The carrier assembly of claim 36, the carrier assembly further comprising a clip body having a clip extension engaged with the pliable member.
38. The carrier assembly of claim 37, wherein the clip body has a clip extension rib engaged with a grooved surface of the pliable member.
39. A carrier assembly for engaging a hose comprising:
a mount comprising: an inside mount surface, an outside mount surface; and
a pliable member comprising a member body configured with a member first end, and a member second end,
wherein the pliable member is engaged on or with the outside mount surface, and
wherein after being engaged on or with the outside mount surface, the first member end is engaged to the member second end.

40. A carrier assembly for engaging a piece of equipment, the carrier assembly comprising:
a mount comprising: an inside mount surface, and an outside mount surface; and
a pliable member comprising a member body configured with a member first end, a member second end.
41. The carrier assembly of claim 40, wherein while the pliable member is in an engaged position on or with the mount, the first member end is engaged to the member second end.
42. The carrier assembly of claim 41, wherein the mount further comprises a locking surface configured with a lock tab receptacle, and the pliable member further comprises a lock tab.
43. The carrier assembly of claim 42, wherein in the engaged position, the lock tab is inserted into the lock tab receptacle.
44. The carrier assembly of claim 42, the carrier assembly further comprising: a second pliable member comprising a respective member body; a respective member first end; a respective member second end; and a respective lock tab,
wherein the mount comprises a second locking surface with a respective lock tab receptacle.
45. The carrier assembly of claim 44, wherein the second pliable member is in a respective engaged position with the second locking surface, and wherein the respective member first end is engaged to the respective member second end.
46. The carrier assembly of claim 40, the carrier assembly further comprising a second mount comprising: a respective inside mount surface, a respective outside mount surface, and a respective slot or receptacle.

47. The carrier assembly of claim 40, wherein the mount further comprises a guide rail, and wherein a deadman assembly is coupled with the guide rail.
48. The carrier assembly of claim 40, wherein the inside mount surface comprises an at least one mount rib.
49. The carrier assembly of claim 40, wherein the inside mount surface comprises an at least one mount rib, wherein the pliable member comprises a member inner surface, and wherein the member inner surface comprises an at least one member rib.
50. The carrier assembly of claim 40, wherein a first clamp is disposed around the pliable member.
51. The carrier assembly of claim 40, wherein the outside mount surface comprises a lock receptacle, and wherein the mount comprises an alignment indicator in order to facilitate for a securing member to engage the lock receptacle.
52. The carrier assembly of claim 40, the carrier assembly further comprising a clip body having a clip extension engaged with the pliable member.
53. The carrier assembly of claim 52, wherein the clip body has a clip extension rib engaged with a grooved surface of the pliable member.
54. The carrier assembly of claim 40, wherein a first clamp is disposed around the pliable member, wherein the outside mount surface comprises a lock receptacle, wherein the mount comprises an alignment indicator in order to facilitate for a securing member to engage the lock receptacle, wherein the carrier assembly has a clip body having a clip extension engaged with the pliable member, and wherein the clip body has a clip extension rib engaged with a grooved surface of the pliable member.