CLAIMS

1. A tubular handling system for conducting subterranean operations comprising:

a bridge disposed within a tubular storage area and coupled to a guide rail, wherein the bridge is configured to translate from a first bridge position to a second bridge position along the guide rail and over the tubular storage area;

an arm coupled to the bridge; and

a gripper coupled to the arm and adapted to engage a first tubular and move the first tubular from a first position to a second position, wherein moving includes moving at least a portion of the first tubular through the bridge between a first portion and a second portion of the bridge.

~~2. A tubular handling system for conducting subterranean operations comprising:~~

~~a bridge;~~

~~an arm coupled to the bridge and configured to translate along a length of the bridge; and~~

~~a gripper coupled to the arm and adapted to engage a first tubular in a tubular storage area.~~

~~3~~2. A tubular handling system for conducting subterranean operations comprising:

a bridge comprising a first portion and a second portion;

an arm rotationally coupled to a transverse member, which is coupled to the bridge between the first portion and the second portion, wherein the transvers member is adapted to translate along a length of the bridge;

a gripper coupled to the arm and adapted to engage with a first tubular in a tubular storage area; and

wherein the arm is adapted to move a tubular between the first portion and the second portion of the bridge upon moving the tubular from a pick-up position to a delivered position.

~~4~~3. The tubular handling system of ~~any one of~~ claim~~s~~ 2 ~~and 3~~, wherein the bridge is adapted to move along a guide rail between a first bridge position and a second bridge position spaced apart from the first bridge position.

~~5~~4. The tubular handling system of ~~any one of the claims 1 and 2~~ claim 1, wherein the arm is adapted to move the tubular between a first portion and a second portion of the bridge upon moving the tubular from a pick-up position to a delivered position.

~~6~~5. The tubular handling system of any one of the claims 1~~, 2,~~ and ~~3~~2, wherein the tubular handling system is adapted to move the first tubular from a first horizontal position

associated with a pick-up position through a vertical position and to a second horizontal position associated with a delivered position.

~~7~~6. The tubular handling system of any one of the claims 1~~, 2,~~ and ~~3~~2, wherein the arm is adapted to translate along at least a portion of a length of the bridge while rotating the tubular from a first horizontal position, through a vertical position, to a second horizontal position.

~~8~~7. A method of operating a tubular handling system for conducting subterranean operations comprising:

translating a bridge of a pipe deck handler to a first bridge position over a tubular storage area;

moving an arm coupled to the bridge toward a first tubular in the tubular storage area;

gripping the first tubular with a gripper coupled to the arm; and

~~at least one of the following processes:~~

~~a) translating the bridge along a guide rail to a second bridge position spaced apart from the first bridge position;~~

~~b)~~ moving the first tubular from a first position to a second position, wherein moving includes moving at least a portion of the first tubular through the bridge between a first portion and a second portion of the bridge~~;~~.

~~c) moving the first tubular from a first horizontal position associated with a pick-up position through a vertical position and to a second horizontal position associated with a delivered position;~~

~~d) translating the arm along at least a portion of a length of the bridge while rotating the tubular from a first horizontal position, through a vertical position, to a second horizontal position; or~~

~~e) any combination thereof.~~

~~9~~8. The method of claim ~~8~~7, wherein translating the bridge is performed in a direction generally transverse to a length of the first tubular.

~~10~~9. The method of claim ~~8~~7, further comprising translating the bridge along a guide rail to a second bridge position spaced apart from the first bridge position, wherein the first bridge position corresponds to ~~a~~ the pick-up position wherein the arm is adapted to engage the first tubular in a tubular magazine and wherein the second bridge position corresponds to ~~the~~ a delivered position.

~~11~~10. The method of claim ~~8~~9, ~~wherein~~ further comprising translating the bridge along the guide rail to a third bridge position spaced apart from the first bridge position and

second bridge position, wherein the third bridge position corresponds to a second pick-up position wherein the arm is adapted to engage a second tubular in a tubular magazine.

~~12~~11. The method of claim ~~8~~7, wherein translating the bridge to the first bridge position further comprises sensing at least one characteristic of the tubular storage area, the at least one characteristic comprising at least one of:

a) a number of tubulars in the tubular storage area;

b) a position of the tubular relative to the tubular storage area; or

c) any combination thereof.

~~13~~12. The method of claim ~~8~~7, wherein moving the first tubular between the first and second positions comprises rotating the first tubular at least 91 degrees or at least 95 degrees or at least 100 degrees or at least 120 degrees or at least 150 degrees or at least 160 degrees.

~~14~~13. The method of claim ~~8~~7, wherein moving the arm toward the first tubular is performed by pivoting the arm about a pivotal axis oriented generally normal to a horizontal plane.

~~15~~14. The method of claim ~~8~~7, wherein the arm is coupled to the bridge through a transverse member, and wherein translating the arm along the bridge is performed by moving the transverse member relative to the bridge.

15. The method of claim ~~8~~7, further comprising moving the first tubular from a first horizontal position associated with a pick-up position through a vertical position and to a second horizontal position associated with a delivered position.

16. The method of claim ~~8~~7, further comprising translating the arm along at least a portion of a length of the bridge while rotating the first tubular from a first horizontal position, through a vertical position, to a second horizontal position.