CLAIMS

1. A method of transferring a tubular from a stored location to a well center of an oil and gas rig using a tubular transfer system, comprising:

moving the tubular from the stored location to a position near the tubular transfer system using a single joint elevator of an offline activity crane;

actuating a boom structure of the tubular transfer system comprising an outer frame, an inner frame disposed within and telescopically coupled to the outer frame, and a clamp mechanism coupled to the inner frame, wherein the inner frame is movable relative to the outer frame along a horizontal direction by a first actuator, wherein the clamp mechanism is moveable relative to the inner frame along a vertical direction by a second actuator;

extending the clamp mechanism along the horizontal direction by actuating the first actuator to telescopically move the inner frame relative to the outer frame to a position where the tubular is centered within the clamp mechanism;

actuating the clamp mechanism of the tubular transfer system to grip and lift the tubular to relieve the weight of the tubular from the single joint elevator;

raising the clamp mechanism along a vertical direction by actuating the second actuator to move the tubular to a position for engagement with a top drive elevator; and

automatically releasing the tubular from the clamp mechanism when the tubular is lifted from the clamp mechanism by the top drive elevator.

2. The method of claim 1, wherein actuating the clamp mechanism comprises actuating a pair of jaws to grip and lift the tubular.

3. The method of claim 1, wherein the first actuator is a piston/cylinder assembly.

4. The method of claim 1, wherein raising the clamp mechanism comprises actuating the second actuator to raise the clamp mechanism along a pair of beams of the inner frame.

5. The method of claim 4, wherein the second actuator is a cable/pulley assembly.

6. The method of claim 1, wherein the tubular comprises a single tubular or a tubular stand.

7. A method of transferring a tubular from a well center to a stored location of an oil and gas rig using a tubular transfer system, comprising:

moving the tubular from the well center to a position near the tubular transfer system;

actuating a boom structure of the tubular transfer system comprising an outer frame, an inner frame disposed within and telescopically coupled to the outer frame, and a clamp mechanism coupled to the inner frame, wherein the inner frame is movable relative to the outer frame along a horizontal direction by a first actuator, wherein the clamp mechanism is moveable relative to the inner frame along a vertical direction by a second actuator;

extending the clamp mechanism along the horizontal direction by actuating the first actuator to telescopically move the inner frame outward relative to the outer frame to a position where the tubular is centered within the clamp mechanism;

actuating the clamp mechanism of the tubular transfer system to grip and lift the tubular to relieve the weight of the tubular from the top drive elevator;

retracting the clamp mechanism along the horizontal direction by actuating the first actuator to telescopically move the inner frame inward relative to the outer frame;

lowering the clamp mechanism along the vertical direction by actuating the second actuator to move the tubular to a position for engagement with a single joint elevator of an offline activity crane; and

automatically releasing the tubular from the clamp mechanism when the tubular is lifted from the clamp mechanism by the single joint elevator.

8. The method of claim 7, wherein actuating the clamp mechanism comprises actuating a pair of jaws to grip and lift the tubular.

9. The method of claim 7, wherein the first actuator is a piston/cylinder assembly.

10. The method of claim 7, wherein lowering the clamp mechanism comprises actuating the second actuator to lower the clamp mechanism along a pair of beams of the inner frame.

11. The method of claim 10, wherein the second actuator is a cable/pulley assembly.

12. The method of claim 7, wherein the tubular comprises a single tubular or a tubular stand.