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SAGA
CONDITION AND VALUATION SURVEY

Report No.: CV3509 **Report Date:** May 28, 2008

Requested By: Todd Hiner, Owner Representative

Attended By: Todd Hiner, Owner Representative

Surveyed: afloat **Location:** Kodiak, Alaska **Date Attended:** May 15, 2008

Name of Vessel: **SAGA**
Official No.: 606800
IMO or Other No.: 7933579
Hull I.D. No.: 755
Hailing Port: Juneau, Alaska
Owners: Epic Corporation
P.O. Box 671
Kodiak, AK 99615
Year Built: 1979
Where Built: Mobile, Alabama
Builder: Bender Shipbuilding Company
Length Overall: 107.0 ft.
Registered Length: 94.3 ft.
Width: 30.0 ft.
Depth: 11.1 ft.
Gross Tons: 198
Net Tons: 134
Type: Uninspected commercial fishing vessel
Service: catcher/tender
Load Line: none - not required
Registry: United States of America
Classed: none
Material: welded steel
Last Dry-docked: November, 2007 - Seward, Alaska (bottom repair - routine maintenance)
Rebuilt: See "Upgrades"
Next Scheduled Dry-docking: 2009

Description

The *Saga* is an all steel Twin Diesel powered scow style uninspected commercial fishing vessel with raked bow stem, V-entry hard chine bottom, straight sides and square stern. The vessel is configured with house/pilothouse aft, main deck/fish holds center and enclosed forecastle and anchor deck forward. The vessel is utilized in Alaska for longline, pot and tender service. At the time of the survey, the vessel was afloat and in all accessible areas observed, appeared to be in good sound condition.

Construction

Transverse Frames	3" x 5" x 5/16" @ 24" centers
Deck Beams	3" x 5" x 5/16" @ 24" centers
House construction	welded steel
Sides	5/16" welded steel
Bottoms	5/16" welded steel
Bulkheads	seven (7) watertight

Deckhouse Layout

The steel deckhouse cabin is positioned on the stern and is entered via a steel watertight door, port and starboard side (port side has an additional steel watertight door through a slop and weather entry). Inside there is a horseshoe hallway which wraps aft across the stern from entrance to entrance and is flanked starboard by a two(2) berth stateroom, engine room entrance, four(4) berth stateroom, storage locker and two(2) berth stateroom. Aft is the ship's full service head and laundry facility and walk-in domestic freezer. Port side contains the galley table, mess facilities and pilothouse stairway. Topside between the cabin and pilothouse is a second deck captain's stateroom with full head facilities and couch. The deckhouse cabin is finished in custom paneling, wallpaper, hardwood cabinetry, vinyl and hard wood trims. Ventilation is via doors and windows.

Galley:

- ◆ True T-35 side-by-side upright stainless refrigerator/freezer
- ◆ double stainless sink with custom L-shaped storage counter with overhead cabinets
- ◆ Jenn-Air 4-burner AC range/oven
- ◆ Sharp Carousel II radar range
- ◆ built-in fiberglass-insulated walk-in freezer with stainless steel door
- ◆ galley table for eight(8) to ten(10) adults

Head:

Pilothouse Layout

The steel pilothouse is positioned aft above the deckhouse cabin and is entered via an internal stairway or port and starboard aluminum watertight doors. Inside, the pilothouse is full width and spacious with main control consol and electronics starboard side. Four(4) captain chairs are positioned forward along the dash. Aft starboard is the navigation center with chart table/locker assembly. There is 360° visibility via safety glass windows including watertight doors with partial obstruction aft due to the cabin roof. There are four(4) heated windows starboard side (2-Speich/2-Sea Clear). The pilothouse is finished in custom paneling, veneers, carpet, vinyl and hardwood trims. Ventilation is via doors.

The pilothouse exterior roof top is a two-tiered non-skid step-up deck configuration. There is two-tier pipe safety railing enclosing the decks. Mounted on the deck is a steel pipe square tubed A-frame light/antenna mast and a steel pipe stern forward life boat boom with a Pullmaster PL4 attached and a Pullmaster PL2 topping winch on the mast. This area contains the lifeboat, life raft and safety EPIRB as well as line and buoy storage.

NAVIGATION EQUIPMENT & ELECTRONICS

Radios/Communications -

- ◆ Stephens SEA156 VHF
- ◆ Icom ICM 55 VHF
- ◆ Standard Horizon VHF
- ◆ Ross DSC 500 VHF
- ◆ (2) Cycomm VEM 1000HF interface
- ◆ Furuno Skanti TRP 82583 SSB
- ◆ Stephens SEA 222 SSB
- ◆ Sailor RT 144 AC VHF
- ◆ (3) Standard hand held VHF's
- ◆ Trac Phone with dispatch
- ◆ Trimble Navigation TNL7001 Galaxy Inmar Stat C/GPS

Radars -

- ◆ Furuno FCR1411 72-mile
- ◆ Furuno 2110 72-mile

Sounders -

- ◆ SimRad Skipper CS112 video sounder
- ◆ Furuno FCV 1100L color sounder

Lorans/GPS/Plotters -

- ◆ Furuno LC 90 Loran C
- ◆ Furuno GP 70 Mark 2 GPS
- ◆ Furuno GP70 GPS
- ◆ ECC Globe computerized navigation system with KDS USA 17" flat screen color monitor

Miscellaneous Electronics and Equipment -

- ◆ Seth Thomas clock and barometer
- ◆ Icom Intercom unit (pilothouse)
- ◆ Standard Horizon LH10 loud hailer
- ◆ Alphone T121F intercom system
- ◆ RCA RS2625 AM/FM tuner/cassette/CD player stereo unit
- ◆ (4) 1500 watt pilothouse heater fans
- ◆ Canon BJC 4100 printer
- ◆ Conex Tide-finder
- ◆ Emerson 19" color TV/VHS/DVD unit
- ◆ Sony 27" color television
- ◆ Philips HDMI DVD player
- ◆ Furuno FAX 207 facsimile
- ◆ Furuno AD-105 converter
- ◆ ToteVision 13" color TV/VHS player
- ◆ Satellite phone system onboard
- ◆ JRC-182 AIS
- ◆ Delphi XM Sky Fi2 satellite radio receiver unit
- ◆ Argos VMS unit
- ◆ Topaz Line 2 power converter

VESSEL STEERAGE AND CONTROLS:

- ◆ (3) station Mathers MMC electric throttle/shift controls
- ◆ (2) station Robertson FU91 electric follow up jog controls
- ◆ (2) Robertson electric jog controls (spares - on line)
- ◆ (3) station Robertson RI101 rudder angle indicators
- ◆ (1) hydraulic ships helm station
- ◆ Sperry 8T magnetic auto pilot
- ◆ Robertson AP45 gyro auto pilot
- ◆ Sperry MK37 gyro compass
- ◆ Ritchie SP6 magnetic compass with Robertson pilot interface (adj. 7/30/90)
- ◆ (2) Vickers 75 hp AC electric driven power assist steerage pump
- ◆ (2) ram dual post quadrant with cross pipe

Engine Room

The engine room is accessed via wood door (fireproof on inside) cabin starboard side via steps below. The engine room is good size with port and starboard main and auxiliary engines, AC and DC electrical distribution, refrigeration, air supply, hydraulics and main flood system. The engine room is very well kept, lit, marked and ventilated. Aft there are two(2) watertight bulkheads with watertight doors housing AC dead front panel, steerage and parts supply.

PROPULSION SYSTEM & ENGINE ROOM MACHINERY:

<u>Main Engine</u>	Twin Caterpillar 3412 12-cylinder diesels
Installed:	<i>Port:</i> 1994 <i>Starboard:</i> 1994
Rebuilt:	<i>Port:</i> 1998 <i>Starboard:</i> 1998
Hours:	<i>Port:</i> 11,506 (22,506 on Hobbs - rebuilt at 11,000 hours) <i>Starboard:</i> 11,554 (22,554 on Hobbs - rebuilt at 11,000 hours)
Horsepower:	520 each (1,040 total)
Start:	32 VDC electric
Cooling System:	keel
Exhaust System:	dry and insulated
Fuel Filtration:	West Falia centrifuge
Attachments:	none
Ventilation:	(2) 208VAC electric driven intake fans/exhaust via fidley and air scoops

Drive Train -

Nozzle:	none
Bow Thruster:	none
Marine Gear:	Twin Disc MG520-1
Ratio:	6.11:1
Tail Shaft:	6" stainless steel (inspected 1997)
Intermediate:	none
Shaft Brake:	none
Stern Bearing:	cutlass rubberized
Propeller:	66" x 53" 5-blade stainless steel (reported)
Rudder:	steel

Electrical Distribution

The dead front AC panel is located aft of the engine room with AC circuit breaker panels in the deckhouse and pilothouse. Additionally, there are DC breakers in the pilothouse.

ELECTRICAL SYSTEM - AC

Auxiliary Nos. 1 and 2

Caterpillar 3306B 6-cylinder diesel (port and starboard aft - AC and hydraulic power)

Installed: *Port:* 2003 *Starboard:* 11/1995
Rebuild: *Port:* 2006 *Starboard:* 2007
Total Hours: *Port:* 11,230.0
Starboard: 1,483.9 (23,483.9 on Hobbs, rebuilt at 22,000.0)
Start: 12 VDC electric
Cooling System: keel
Exhaust System: dry and insulated
Filtration: Racor
Attachments: each auxiliary has the following:
Marco hydraulic DP26 gear pump direct driving (2) Vickers 35/25 2-stage hydraulic pumps
Port: Caterpillar 225 kW 3-phase AC generator
Starboard: Magna Plus 166 kW 3-phase AC generator (new 11/95)
Service: 120/208/408VAC

Auxiliary No. 3

Detroit 371NA 3-cylinder diesel (port side - AC power)

Installed: 1979
Rebuild: unknown
Total Hours: unknown (estimated @ 900 - 1,000 hours) - hotel
Start: 12 VDC electric
Cooling System: keel
Exhaust System: dry and insulated
Filtration: Racor
Attachments: Twin Disc manual PTO (not in use)
Delco 20 kW 3-phase AC generator (rebuilt 1996)
Service: 120/208 VAC

ELECTRICAL SYSTEM - DC

Batteries:

(2) banks 32 VDC (8 - 8 VDC 8D wet cell batteries) (engine start)
(2) banks 12 VD C(2 - 12 VDC 8D wet cell batteries) (emergency pilothouse)

Charging System:

(1) Newmar 115-12-35 amp AC battery charger
(1) Newmar 115-12-15 amp AC battery charger
(1) LaMarche 32 VDC AC battery charger
(1) Ratelco 32 VDC AC battery charger

Overload Protection:

circuit breakers

Alarm Systems

Custom Hendrix Electric, Inc. alarm, powered with lights, horn and silencer

All Engines	oil pressure, water temperature and level
Auxiliary Engine	oil pressure, water temperature and level (add. shutdowns)
Bilge	forward, engine room, lazarette
Flow	flow alarm on crab pump No. 1, 2 and 3; high/low fish hold alarms
Fire	engine room, galley
Bridge Watch	yes - RDI
General	yes - with flashing amber light in engine room

Refrigeration

- ◆ (2) Thermal Tec 30 ton 30Hp AC electric driven piston R-22 RSW system with cold manifold (compressor crankshaft renewed in 2001)
- ◆ (1) Thermal Tec 20 ton 20Hp AC electric driven vane R-22 RSW system
- ◆ (1) R12 refrigerant system for forepeak walk-in freezer

Hydraulics

- ◆ See "Auxiliary Nos. 1 and 2"
- ◆ Additional:
 - (2) 2 hp AC electric driven deck crane pilot pumps

Hydraulic Reservoir

- ◆ 500 gallon steel tank in engine room, starboard side

Air Supply*

- ◆ (1) Ingersoll-Rand 242-5D AC electric self-contained unit
- ◆ (1) Ingersoll-Rand 242 AC electric driven compressor unit

*Both air compressor units utilize the same Ingersoll Rand T-30 steel receiver tank

TANKS:

Fuel System

There are seven (7) integral fuel oil tanks reported to have the following capacities:

DOT #1 - stern center	=	1,500 gallons
FOT #1 - port and starboard wing forward amidships	=	5,000 gallons each
FOT #2 - port and starboard wing amidships	=	8,000 gallons each
FOT #3 - port and starboard wing aft of amidships	=	4,000 gallons each
Total Estimated Fuel Capacity	=	35,500 gallons

Fuel Fills:	extended pipe above deck at bulwarks port and starboard
Fuel Vents:	extended screened goosed necked pipe above deck at bulwarks, port and starboard
Fuel Lines:	steel pipe
Fuel Shutoff:	fuel manifold
Centrifuge:	West Falia
Fuel Transfer:	Worthington 1-1/2" AC electric driven pump

Fresh Water

There are two (2) steel fresh water tanks:

FWT #1 -stern wing port and starboard	=	5,000 gallons each
Total Reported Capacity	=	10,000 gallons

Fresh water supplied by:	Teel AC electric driven 1-1/4" pressurized pump system
Hot water supplied by:	Reliance 501 240 VAC 50-gallon tank
Water Maker:	none

Miscellaneous Tanks

VOIDS:	(2) 4,000-gallon stern void tanks (2) bow crash voids (2) interbottom voids
Ballast:	fish holds/fuel/water
Sewage:	yes
Lube Oil:	(1) 500-gallon steel tank in engine room, port side (top) Worthington 1" AC electric driven transfer pump
Waste Oil:	(1) 500-gallon steel tank in engine room port side (lower)

Pumps

- ◆ (1) Vanguard 9 Hp manual/electric Pacer 3" emergency pump (fixed in position for operation)
- ◆ (4) Deming 6" x 6" 20 Hp AC electric driven crab pumps with Schedule 80 steel manifold emergency engine suction (pipe plumbing rebuilt 1996)
- ◆ (2) FlowMax 2" AC electric driven pumps (washdown/bilge) with check valves
- ◆ (3) Price 1-1/4" 1.5 Hp AC electric driven centrifugal RSW condenser pumps

Sea Cocks/Chests

- ◆ (4) 12" (crab/RSW)
- ◆ (1) 12" x 16" box (all purpose [port engine room forward coffer dam])

Deck and Rigging

The vessel is configured with pilothouse wrap-around deck above the deckhouse cabin, enclosed via pipe safety railing. Main working deck between the deckhouse cabin and enclosed forecastle with anchor deck above having pipe safety railing and wave splash wall exterior port side. The main deck is made flush with 2" x 6" Apitong hardwood planking. There are three(3) foam insulated fiberglass refrigerated centerline fish holds with raised coaming and flush steel bolt-down covers. There is a dry hold forward with raised steel coaming and steel bolt-down flush cover. The forecastle is entered via a watertight steel door starboard side aft and contains access to dry hold, storage and Imperial walk-in insulated bait freezer.

At the time of the survey, the vessel was equipped as follows:

- ◆ steel box double A-frame range/light bow mast
- ◆ steel pipe A-frame stern mast with PullMaster PL2 topping winch attached
- ◆ steel reinforced lift boat cargo stern boom with PullMaster PL4 winch attached
- ◆ steel box ram actuated stiff arm picking boom (starboard side)
- ◆ Slattery 12 ton hydraulic deck knuckle crane (port side)
- ◆ Marco JO111 crab block with King coiler (storage with spare onboard)
- ◆ double action custom crab pot launcher with hydraulic safety dogs (storage)
- ◆ Kolstrand hydraulic crab bait chopper (new October, 2004)
- ◆ (11) 1,000 watt sodium lights
- ◆ (10) 1,500 watt quartz lights

Anchor Deck

- ◆ 1,500 lb. Danforth anchor
- ◆ 50 fathoms (10 fathoms of 1-1/8"/40 fathoms of 1") stud-link chain
- ◆ 50 fathoms x 1" cable (new)
- ◆ hydraulic anchor winch with capstan

Spare: 1,000 lb. anchor

SAFETY EQUIPMENT:

Approved Life Jackets: none

Ring Buoy:	(3) 30" orange	taglines: yes	name: yes	tape: yes
Survival Suits:	(8) adult; (1) child	whistles: yes	tape: yes	lights: yes
Flares:	assorted to 50-mile	expire: 5/06; 10/06; 1/07		
Life Raft:	Elliott 10-person Solas A	inspection due: 6/08		hydro due: 6/08
Life Raft:	SMR Crew Saver 6-person	Solas A (for drills only)		
	inspection due: 1/99	hydro due: 6/04		
EPIRB:	ACR 406 Category 1	battery expires: 10/06		hydro expires: 6/08
	registration expires: 1/14/06			
Life Boat (auxiliary):	(1) 13' Boston Whaler life boat with gas outboard			
Spot Light:	crab lights			
Horn:	(1) air compressed			
Bell:	12" brass			
Medical Kit:	yes			
Day shape:	yes			
Other:	(1) Life Sling			

Fire Extinguishers/Equipment*

- ◆ (1) 20 lb. dry chemical (pilothouse)
- ◆ (2) 2-3/4 lb. Halon 1211 (under pilothouse dash)
- ◆ (1) 5 lb. dry chemical (pilothouse stairway entrance)
- ◆ (1) 15 lb. CO₂ (port side cabin entrance)
- ◆ (1) 20 lb. dry chemical (aft cabin)
- ◆ (1) 15 lb. dry chemical (starboard cabin entrance)
- ◆ (1) 20 lb. Halon (engine room entrance)
- ◆ (3) 15 lb. dry chemical (engine room)
- ◆ (1) 20 lb. dry chemical (forepeak)
- ◆ (4) 100 lb. Halon 1301 auto fire suppression cylinders (engine room)
- ◆ (1) 20 lb. dry chemical (dry hold)
- ◆ (1) fire axe
- ◆ (2) Scott breathing packs

*Extinguishers last inspected: 6/07

Miscellaneous Equipment

- ◆ MayTag Neptune stackable AC washer/dryer
- ◆ Gibson AC dryer
- ◆ Miller Dial Arc AC welder

Upgrades

2007

- ◆ Starboard Auxiliary No. 2 rebuilt.

2006

- ◆ Port Auxiliary No. 1 rebuilt.

2004

- ◆ New Kolstrand hydraulic bait chopper installed.
- ◆ Electronics upgraded.

2003

- ◆ New Auxiliary No. 1 (port) installed.

1994 - 2002

- ◆ New main engines installed.
- ◆ Exterior hull and house sandblasted and painted.
- ◆ New main engine keel coolers installed.
- ◆ Propellers refurbished.
- ◆ Hull inspected and miscellaneous repairs completed.
- ◆ Fuel tanks inspected.
- ◆ New RSW chillers and plumbing installed.
- ◆ Void bulkhead reinforced between fuel tanks.
- ◆ Rebuilt centrifuge.
- ◆ Deck crane rebuilt.
- ◆ Zincs, bottom paint routine maintenance every two (2) years.
- ◆ New tail shafts.
- ◆ Propellers refurbished.

- ◆ Refrigeration compressor rebuilt.
- ◆ Electronics updated.
- ◆ Forepeak/mast rewired.
- ◆ Hull repainted (2002).

Remarks

1. A Stability Test was performed by Y. K. Mok, Inc., N.A. & M.E. of New Orleans on July 17, 1979 to reflect pot deck load limitations in icing and non-icing conditions. A copy is onboard.
2. The values below reflect a vessel that is being maintained in good sound condition and which can be readily dependable to be utilized as intended for her age. The recent Bering Sea crab fleet reduction has also created an inventory reduction, not necessarily increasing older vessel values that can still participate in the Bering Sea fisheries, but at the same time stabilizing a downward turn in older vessel values if they are in good sound condition. Therefore, the "market" value of the F/V *Saga* remains relatively strong in today's market.

The values *do not* include any moratorium or fishing rights and are reflective of the vessel's physical "Hull and Machinery" only.

Recommendations

1. Flare kit is missing six (6) handheld aerial flares. Obtain currently dated replacements and place in kit.
2. Three (3) of the four (4) engine room high heat sensors need to be replaced, due to having been painted on the sensor head, corrosion or age and poor installation. Once replaced, test all in good working order.
3. The crab picking boom ram pin at the boom appears to be missing the keeper bolt. Inspect and ensure a keeper bolt is installed.
4. Forepeak watertight door dogs need to be made in good working order.
5. The pilothouse fire extinguishers are enclosed in the dash cabinet to the port side. Mark the cabinet door exterior with a fire extinguisher placard for internally mounted unit.
6. The pilothouse port side watertight door window is cracked. Replace.
7. The USCG safety sticker has expired. Schedule a USCG inspection and obtain current sticker.
8. Label all watertight doors below deck "Keep Closed" or "Keep Closed While Underway."
10. Main deck wear planking is aged and loose in areas. Inspect, secure or replace planking as necessary.
11. Ensure exhaust wrap is placed on the starboard auxiliary engine exhaust elbow and flange.
12. Ensure port side rudder post packing gland securing bolts all have double nuts.
13. The EPIRB battery and NOAA registration have expired. Replace/renew.
14. The port side boom rooftop safety wire shackle and topping block shackle need to be safetied.

Exhaust Stacks & Stovepipe Clear of Woodwork? Yes

Has vessel been well cared for by owners?: Yes

Number of Crew: 4 - 6

Waters Navigated: Alaskan Coastal Waters

With the exception of defects noted, do you fully recommend the physical hazard?: Yes


Estimated Present Replacement Value: \$4,150,000.00

Estimated Present Market Value: \$2,100,000.00

This survey was performed without prejudice.

This survey sets forth the apparent condition of the vessel, including hull, machinery, equipment, fittings and gear, to the best of the surveyor's ability without removal of bulkheads, paneling, ceilings or other portions of her structure and without the opening of her machinery or auxiliaries for internal examinations or their operation for performance study. It represents the surveyor's honest and unbiased opinion but in submitting this survey, it is understood by all parties concerned, that this survey is not to be considered a guarantee of its accuracy, nor does it create any liability on the part of the surveyor or his employers arising out of the reliance on information contained in this survey.

Date: *May 28, 2008*



JACK L. McFARLAND, President/Marine Surveyor

Attached: Photos