

WRECK SECTION

W1025-0211

Rpt. C.T.

Index. No.

27821

Lloyd's Register of Shipping. SURVEYS FOR FREEBOARD.

110.567

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having **POOP, BRIDGE & FORECASTLE**.

(Type of Superstructures.)

| | | | | |
|----------------------------------|---|----------------------------------|--------------------------------|--------------------------------|
| Ship's Name S.S. PASHA | Nationality and Port of Registry BRITISH - LONDON | Official Number 143375 | Gross Tonnage 5309 ✓ | Date of Build 1919.8 |
|----------------------------------|---|----------------------------------|--------------------------------|--------------------------------|

Moulded Dimensions: Length **400** Breadth **52** Depth **31**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **12065** tons

Coefficient of fineness for use with Tables **1.40**

Port of Survey **BALAHUA**

Date of Survey **12.12.32**

Name of Surveyor **D. PASHA**

Particulars of Classification **+ 100 A.1.**
S.S. Cal. No. 3-3-31

| Depth for Freeboard (D) | Depth correction | Round of Beam correction |
|---|--|---|
| Moulded depth ... 31.00 | (a) Where D is greater than Table depth (D - Table depth) R = (31.04 - 26.64) 3 = + 13.11 | Moulded Breadth (B) 52.0 |
| Stringer plate ... 0.04 | (b) Where D is less than Table depth (if allowed) (Table depth - D) R = | Standard Round of Beam = $\frac{B \times 12}{50} = \frac{52 \times 12}{50} = 12.48$ |
| Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ | If restricted by superstructures | Ship's Round of Beam = 13.00 |
| Depth for Freeboard (D) = 31.04 | | Difference 0.52 inches |
| | | Restricted to |
| | | Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.52^2}{4} \times \left(1 - \frac{.52}{52} \right) = .06$ |

DEDUCTION FOR SUPERSTRUCTURES.

| | Mean Covered Length (S) | Equivalent Enclosed Length (S ₁) | Height | Height Correction | Effective Length (E) |
|-------------------------|-------------------------|--|------------|-------------------|----------------------|
| Poop enclosed ... | 49.25 | 49.25 | 7' 11 1/2" | - | 49.25 |
| „ overhang ... | | | | | |
| R.Q.D. enclosed ... | | | | | |
| „ overhang ... | | | | | |
| Bridge enclosed ... | 112.66 | 112.66 | 7' 11 1/2" | - | 112.66 |
| „ overhang aft ... | | | | | |
| „ overhang forward ... | | | | | |
| Fore enclosed ... | 39.50 | 39.50 | 7' 11 1/2" | - | 39.50 |
| „ overhang ... | | | | | |
| Trunk aft ... | | | | | |
| „ forward ... | | | | | |
| Tonnage opening aft ... | | | | | |
| „ forward ... | | | | | |
| Total ... | 201.41 | 201.41 | | | 201.41 |

Standard Height of Superstructure **4.5**

„ „ R.Q.D. **42.00**

Deduction for complete superstructure **42.00**

Percentage covered $\frac{S}{L} = \frac{50.35}{100} = 50.35\%$

„ „ $\frac{S_1}{L} = \frac{50.35}{100} = 50.35\%$

„ „ $\frac{E}{L} = \frac{50.35}{100} = 50.35\%$

Percentage from Table, Line A.
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. **36.35**
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = **42.00 × 36.35 = 15.27**

SHEER CORRECTION.

| Station | Standard Ordinate | S | Product | Actual Ordinate | Effective Ordinate | S | Product |
|---------------------|-------------------|---|---------|-----------------|--------------------|---|---------|
| A.P. ... | 50.00 | 1 | 50.00 | 60.00 | 60.00 | 1 | 60.00 |
| 1/2 L from A.P. ... | 22.25 | 4 | 89.00 | 28.00 | 26.86 | 4 | 107.44 |
| 1/2 L „ ... | 5.50 | 2 | 11.00 | 8.00 | 6.41 | 2 | 13.42 |
| Amidships ... | | 4 | | 0.00 | | 4 | |
| 1/2 L from F.P. ... | 11.00 | 2 | 22.00 | 13.00 | 13.23 | 2 | 26.46 |
| 1/2 L „ ... | 44.50 | 4 | 178.00 | 51.00 | 52.93 | 4 | 211.72 |
| F.P. ... | 100.00 | 1 | 100.00 | 116.00 | 120.00 | 1 | 120.00 |
| Total ... | | | 450.00 | | | | 539.04 |

Mean actual sheer aft = **100.00**

Mean standard sheer aft = **100.00**

Mean actual sheer forward = **100.00**

Mean standard sheer forward = **100.00**

Length of enclosed superstructure forward of amidships = **2.16**

„ „ aft of „ = **2.16**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{89.04}{18} \left(.75 - \frac{.45}{2.16} \right) = -2.46$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

| Deduction for Tropical Freeboard. Addition for Winter and Winter North Atlantic Freeboard. Depth to Freeboard Deck = 31.04 Summer freeboard = 5.96 Moulded draught (d) = 25.08 Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = $\frac{25.08}{4} = 6.27 = 6 \frac{1}{4}$ inches Addition for Winter North Atlantic Freeboard (if required) = | Deduction for Fresh Water. Displacement in salt water at summer load water line $\Delta = 11565$ Tons per inch immersion at summer load water line $T = 41.3$ Deduction = $\frac{\Delta}{40T}$ inches = $\frac{11565}{40 \times 41.3} = 7.0$ inches | TABULAR FREEBOARD corrected for Flush Deck (if required) Correction for coefficient $\frac{.44 + .68}{1.36} = \frac{1.12}{1.36} = .82$ <table><tr><th></th><th>+</th><th>-</th></tr><tr><td>Depth Correction ...</td><td>13.11</td><td>-</td></tr><tr><td>Deduction for superstructures ...</td><td>-</td><td>15.27</td></tr><tr><td>Sheer correction ...</td><td>-</td><td>2.46</td></tr><tr><td>Round of Beam correction ...</td><td>-</td><td>.06</td></tr><tr><td>Correction for Thickness of Deck amidships ...</td><td>-</td><td>-</td></tr><tr><td>Other corrections, scantlings, etc. ...</td><td>-</td><td>-</td></tr><tr><td></td><td>13.11</td><td>14.49</td></tr></table> Summer Freeboard = 41.54 | | + | - | Depth Correction ... | 13.11 | - | Deduction for superstructures ... | - | 15.27 | Sheer correction ... | - | 2.46 | Round of Beam correction ... | - | .06 | Correction for Thickness of Deck amidships ... | - | - | Other corrections, scantlings, etc. ... | - | - | | 13.11 | 14.49 |
|--|---|---|--|---|---|----------------------|-------|---|-----------------------------------|---|-------|----------------------|---|------|------------------------------|---|-----|--|---|---|---|---|---|--|-------|-------|
| | + | - | | | | | | | | | | | | | | | | | | | | | | | | |
| Depth Correction ... | 13.11 | - | | | | | | | | | | | | | | | | | | | | | | | | |
| Deduction for superstructures ... | - | 15.27 | | | | | | | | | | | | | | | | | | | | | | | | |
| Sheer correction ... | - | 2.46 | | | | | | | | | | | | | | | | | | | | | | | | |
| Round of Beam correction ... | - | .06 | | | | | | | | | | | | | | | | | | | | | | | | |
| Correction for Thickness of Deck amidships ... | - | - | | | | | | | | | | | | | | | | | | | | | | | | |
| Other corrections, scantlings, etc. ... | - | - | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13.11 | 14.49 | | | | | | | | | | | | | | | | | | | | | | | | |

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

| | |
|---|--|
| Tropical Fresh Water Line above Centre of Disc ... 13.11 | Tropical Fresh Water Freeboard ... 4' 10 1/4" |
| Fresh Water Line „ „ ... 4.00 | Fresh Water „ „ ... 5' 4 1/2" |
| Tropical Line „ „ ... 6.27 | Tropical „ „ ... 6' 5 3/4" |
| Winter Line below „ „ ... 6.27 | Winter „ „ ... 6' 5 3/4" |
| Winter North Atlantic Line „ „ ... 6.27 | Winter North Atlantic „ „ ... 6' 5 3/4" |

8 JAN 1933

RECEIVED 15/1/33

RECEIVED 15 OCT 1936

RECEIVED 1 MAY 1933

Lloyd's Register of Shipping

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

| HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS | | | | | | | | | | |
|---|---|---------------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|---|---|---|
| Description of Hatchway | | | | No. 1. | No. 2. | No. 3. | No. 4. | No. 5. | | |
| Dimensions of Hatchway | | | | 32'-6" x 25'-0" | 34'-8" x 20'-0" | 13'-0" x 18'-0" | 34'-8" x 20'-0" | 28'-2" x 25'-0" | | |
| COAMINGS | { | Height above Deck ... | 30" | | 18" | | | | Bridge deck lumber hatchways. | |
| | | Thickness { Sides ... | 44 | as in ✓ | 44 | as in | as in | 1. Lumber hatch on either side of mainline and casing | | |
| | | { Ends ... | 44 | | 44 | | | | | |
| | | Stiffeners | 9 x 3/8 B.A. | No. 1. | 9 x 3/8 B.A. | No. 1. | No. 1. ✓ | | | |
| | | Brackets, Stays ... | 2" dia | | 2" dia | | | | | 8'-9" x 4'-0" |
| HATCH BEAMS | { | Number | 5 | 5 | | 5 | 4 | | Coamings 30" high - Spacing of cleats 2'-0" / 3" hatch boards, 2 tarpaulins | |
| | | Spacing | 5'-5" | 5'-10" | | 5'-10" | 5'-9" | | | |
| | | Scantling and Sketch ... | 18 x 7 x 9 5/8 2 x 6 | as in - No. 1. | ✓ | as in - No. 1. | as in - No. 1. | | | |
| | | Bearing Surface | 3/2" | | | | | | | No. 3 hatch in bridge space 15'-2" x 18'-0" |
| FORE AND AFTERS | { | Number | | | 3 | | | | Coaming 8 x 3 B.A. otherwise particulars as for bridge deck - | |
| | | Spacing | | | 4'-5" | | | | | |
| | | Unsupported Lengths ... | | | 3 x 3 x 10 angles | | | | | |
| | | Scantling* and Sketch ... | ✓ | ✓ | 12 x 3/4 plate | ✓ | ✓ | | | 4 Running hatchways in bridge space 2'-6" x 2'-6" - 9 x 3 B.A. Coaming - 3" hatch covers - 2 tarpaulins |
| | | Bearing Surface | | | 3 1/2" ✓ | | | | | |
| HATCH COVERS | { | Material | PINE | | PINE | | | | | |
| | | Thickness | 3" | as in - | 3" | as in | as in | | | |
| | | How fitted | F & A. | No. 1 | THWARTSHIP. | No. 1. | No. 1. | | | |
| | | Bearing Surface | 3" | | 3" | | | | | |
| Spacing of Cleats | | | | 2'-0" | | | | | | |
| Number of Tarpaulins | | | | 4 | - do - | - do - | - do - | - do - | | |

*Are wood fore and afters steel shod at all bearing surfaces?

Are battens and wedges efficient and in good condition?

Are tarpaulins in good condition and in accordance with rule requirements?

Are lashings provided in accordance with rule requirements?

Locking bar fitted to No. 1 hatchways at Marachi 13/5/42.

Particulars of fiddley, funnel and ventilator foamings:—

Particulars of fiddley, funnel and ventilator casings:—

| | |
|--|--|
| Double funnel casing - fiddley tops closed by hinged steel storm covers & gratings - two | |
| hinged steel doors to fiddley on bridge deck in bridge space secured by handes blocks - | |
| 2 - 30" inch diameter ventilators to Stakehold - Coamings 4'-6" high - | |
| 2 - 30 " " " " " " 4'-6 " - | |
| 2 - 20 " " " " " " 4'-6 " - | |

Particulars of Flush Bunker Scuttles:—

II.

Particulars of Companionways:—

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Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—

Particulars of Ventilators in exposed positions on freeboard and superstructure decks :—
18" inch diameter ventilators 15 holes - coamings 3'-0" high fitted with wooden plugs & canvas covers.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—
2" inch diameter air pipes - Swan-neck N.I. - 3'-6" high fitted in way of Bulwarks -
wooden plugs supplied for closing purposes -

Particulars of Gangway Cargo and Coaling Ports :—

Particulars of Gangway Cargo and Coaling Ports:—
One cargo door on port starboard side of bridge space 5'-0" x 3'-3" secured by strongbacks.

Particulars of Scuppers and Sanitary Discharge Pipes:—

6" x 6" Scupper holes cut in bulwark plating.

All sanitary discharges fitted with storm valves.

Particulars of Side Scuttles:—

18" inch diameter side scuttles fitted with hinged C.I. covers.

Particulars of Guard Rails:—

Guard rails fitted on poop, bridge fore-castle - 3.6" high.

Particulars of Gangways, Lifelines, etc.:—

Life lines can be rigged for safety of crew.

Particulars of Freeing Arrangements.

| | Length of Bulwark | Height of Bulwark | Size of Freeing Ports | Number each side | Area each side | Rule area each side |
|---------------------|-----------------------|-------------------|-----------------------|------------------|----------------|---------------------|
| After Well | 99.9 ^{3 1/2} | 3.9" | 4.9" x 1.6" | 3. | 21. ✓ | 20. ✓ |
| Forward Well | 99.9 ^{3 1/2} | 3.9" | 4.9" x 1.5" | 3. | 21. ✓ | 20. ✓ |

State position of each freeing port } After Well:— POOP 14.3" 32.0" 40.0" 13.6" BRIDGE.
 (F. and A. position and height above deck edge) } Forward Well:— FCLE 34.6" 29.0" 29.3" 11.0" BRIDGE.
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
 Additional area where sheer is less than standard. Freeing ports fitted with single bar flap 16" inches above deck.

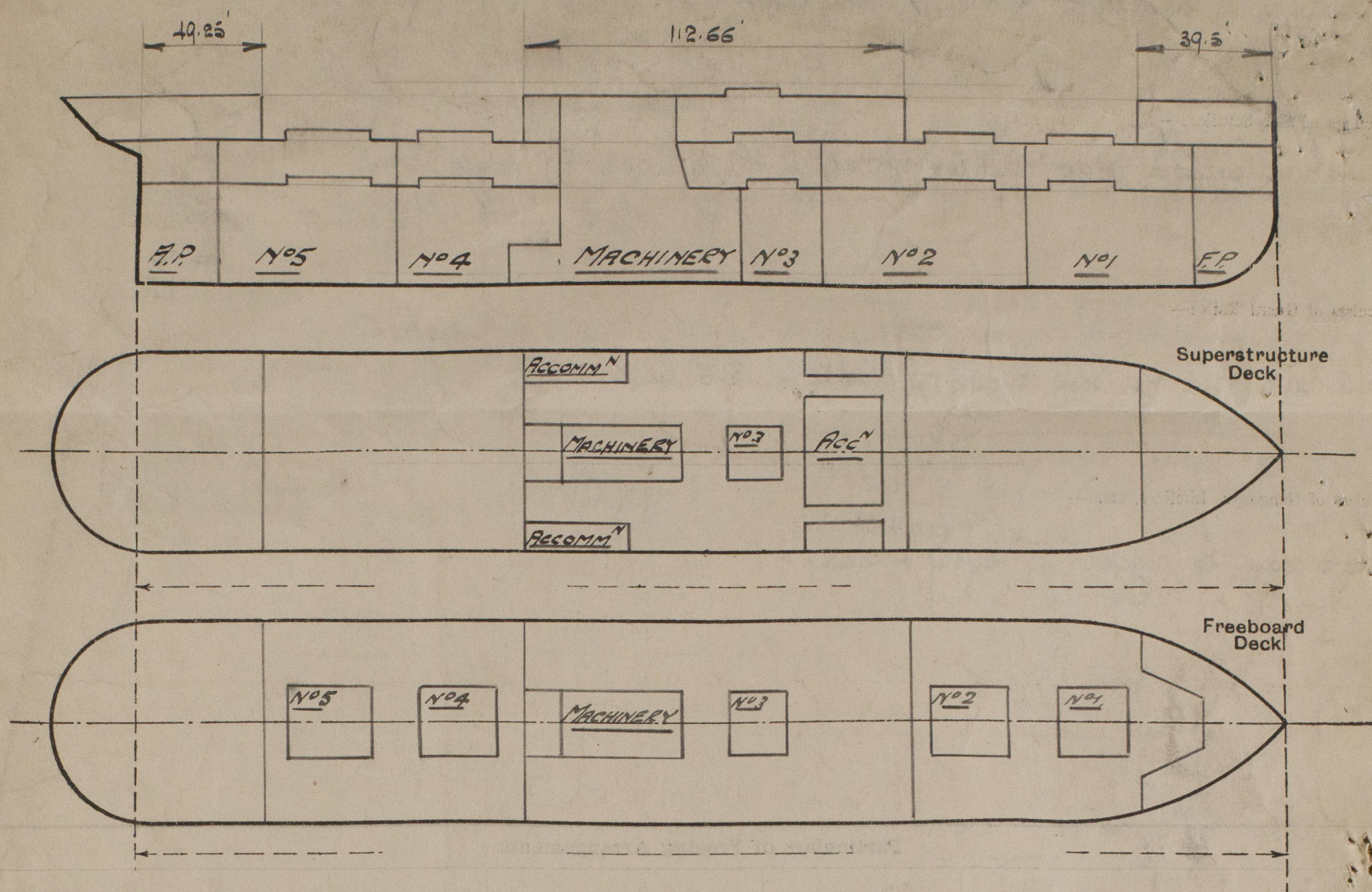
Particulars of Superstructures, Trunks, Casings, Deckhouses.

| | Coaming | Plating | Stiffeners | Spacing | End Attachments of Stiffeners | Size of Openings | Height of Sills | Height of Casings |
|--|----------------|---------|-----------------|---------|-------------------------------|--|-----------------|-------------------|
| Poop Bulkhead | 3'-10" x 5/16 | 5/16" | 6 x 3 1/2 x 3/8 | 30" | ✓ | 2'-6" x 4'-9" | 18" | 7'-11 1/2" |
| Raised Quarter Deck Bulkhead | | | | | | | | |
| Bridge, After Bulkhead | 3'-10" x 5/16 | 5/16 | 4 x 3 x 3/8 | 30" | ✓ | 5'-1" x 3'-0" | 20" | 7'-11 1/2" |
| Bridge, Forward Bulkhead | 3'-10" x 5/16 | 3/8 | 4 x 3 1/2 B.R. | 30" | 15 brackets | 5'-0" x 3'-0" | 18" | 7'-11 1/2" |
| Fore-castle Bulkhead | 3 x 3 x 3/8 | 1/4" | 4 x 3 x 3/8 | 30" | ✓ | Open fore-castle | | 7'-11 1/2" |
| Trunk, Aft | | | | | | | | |
| Trunk, Forward | | | | | | | | |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks | | | | | | | | |
| Exposed Machinery Casings on Super-structure Decks | 3'-10" x 5/16 | 3/8" | 3 x 3 x 3/8 | 30" | ✓ | 5'-3" x 2'-1" | 18" | 8'-0" |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | Efficient 1/4" | 1/4" | 3 x 3 1/2" | 2' 5" | | 20 5'0" x 2'3" 1'-5" 10 5'2" x 2'4" 1'-5" | | 8'-0" |
| Deckhouses on Flush Deck Ships | | | | | | | | |

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

| | |
|--|--|
| Poop Bulkhead | Two hinged steel doors to crew quarters secured by handes blocks. ✓ |
| Raised Quarter Deck Bulkhead | |
| Bridge, After Bulkhead | 3" inch storm bars in channels full height. ✓ |
| Bridge, Forward Bulkhead | Hinged steel doors secured by double cleats operated from both sides. ✓ |
| Fore-castle Bulkhead | Open - no closing appliances. ✓ |
| Exposed Machinery Casings on Free-board or Raised Quarter Decks | |
| Exposed Machinery Casings on Super-structure Decks | B.R. casing protected by accommodation - two steel doors on bridge deck. ✓ |
| Machinery Casings within Superstructures not fitted with Class I Closing Appliances | Two hinged steel doors in bridge space to B.R. secured by handes blocks. ✓ |
| Deckhouses on Flush Deck Ships | Steel skylight hand operated. ✓ |

Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shewn on the following sketches:—



The freeboard deck is not sheathed. ✓

State any special features in the construction of the ship:—

Particulars taken when vessel was in drydock for Condition Survey. ✓
must

Builder's name and yard number

Names of sister ships

Owners *Asiatic Steam Nav Co.*

Fee *£18 6/6*

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