

SAT. 4 NOV. 1922 No. 28450

Rpt. 4a.

REPORT ON MACHINERY

Received at London Office SAT. 22 APR. 1922

Date of writing Report 19 When handed in at Local Office 21 April 1922 Port of Manchester
 No. in Survey held at Manchester Date, First Survey 12-8-21 Last Survey 10 April 1922
 Reg. Book. on the Steam Turbines Nos 1970/1 and Double Reduction Gear No 1974 for S. I. British Lord
 Master Built at Sunderland By whom built J. L. Thompson & Son (Spence) When built 1922
 Engines made at Manchester By whom made Metropolitan Vickers E. Co. Ltd. when made 1922
 Boilers made at Sunderland By whom made J. Dickinson & Son Ltd. (No. 860) when made 1922
 Registered Horse Power 644 N.H.P. Owners British Tankers Co. Ltd. Port belonging to London
 Shaft Horse Power at Full Power 3200 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

TURBINE ENGINES, &c.—Description of Engines Ration Impulse H.P. & L.P. No. of Turbines Two
 Diameter of Rotor Shaft Journals H.P. 5" L.P. 5" Diameter of Pinion Shaft 1st Reduction 3 1/8" 2nd Reduction 5 1/4" dia.
 Diameter of Journals (1st Red) 6 1/2" (2nd Red) 10 1/2" Distance between Centres of Bearings (1st Red) 1 1/2" (2nd Red) 1 1/2" Diameter of Pitch Circle (1st Red) 6 7/8" (2nd Red) 11 1/4" (1st Red) 11 1/4" (2nd Red) 11 1/4"
 Diameter of Wheel Shaft (1st Red) 10 1/2" (2nd Red) 19" Distance between Centres of Bearings (1st Red) 2 1/4" (2nd Red) 2 1/4" Diameter of Pitch Circle of Wheel (1st Red) 43 1/2" (2nd Red) 78 3/4"
 Width of Face (1st Red) 10 1/2" (2nd Red) 14 1/2" Diameter of Thrust Shaft under Collars 14 1/2" Diameter of Tunnel Shaft as per rule 14 1/2" as fitted 19"
 No. of Screw Shafts one Diameter of same as per rule 16 1/2" as fitted 17 1/2" Diameter of Propeller 18 3/4" Pitch of Propeller 17 9/16"
 No. of Blades 4 State whether Moveable yes Total Surface 110 sq ft Diameter of Rotor Drum, H.P. L.P. astern
 Thickness at Bottom of Groove, H.P. L.P. Astern Revs. per Minute at Full Power, Turbine 3125 Propeller 72.9

PARTICULARS OF BLADING.

	H. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	1 1/8"	3 1/2" 3 1/2" 3 1/2"	2	1 3/8"	3 3/8"	1	H.P.	H.P.	H.P.
2ND	4/8"	3 1/2" 3 1/2" 3 1/2"	1	1 3/8"	3 3/8"	1	1"	3 1/2" 3 1/2" 3 1/2"	2
3RD	7/8"	3 1/2" 3 1/2" 3 1/2"	1	2 1/8"	3 1/2" 3 1/2" 3 1/2"	1	2 1/8"	3 1/2" 3 1/2" 3 1/2"	1
4TH	7/8"	3 1/2" 3 1/2" 3 1/2"	1	4 3/8"	3 1/2" 3 1/2" 3 1/2"	1	L.P.	L.P.	L.P.
5TH	1"	3 1/2" 3 1/2" 3 1/2"	1	6 1/8"	3 1/2" 3 1/2" 3 1/2"	1	2 1/2"	3 1/2" 3 1/2" 3 1/2"	1
6TH				8 1/4"	3 1/2" 3 1/2" 3 1/2"	1	6 3/16"	3 1/2" 3 1/2" 3 1/2"	1
7TH				10 1/16"	4 1/2" 4 1/2" 4 1/2"	1			
8TH									

No. and size of Feed pumps 1 Weir's 9 1/2" x 7" x 21" 1-2 1/2" Dunsdale Electric Centrifugal
 No. and size of Bilge pumps 2 @ 6" x 12"
 No. and size of Bilge suction in Engine Room 3 @ 3 1/2" 1 @ 3" in each oil well

In Holds, &c. Forward hold - cargo hold - 2 @ 2".

OIL TANK STEAMER

No. of Bilge Injections 1 sizes 11" Connected to condenser, or to circulating pump 6 P Is a separate Donkey Suction fitted in Engine Room & size yes, 3 1/2"
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line both
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes
 What pipes are carried through the bunkers none How are they protected
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door mahogany worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel John Spence & Sons Ltd.
 Total Heating Surface of Boilers 8265 sq ft Is Forced Draft fitted yes No. and Description of Boilers Three single ended marine
 Working Pressure 200 Tested by hydraulic pressure to 350 Date of test 13-2-22 No. of Certificate 3791
 Can each boiler be worked separately yes Area of fire grate in each boiler (oil fired) No. and Description of Safety Valves to each boiler two direct spring Area of each valve 9 1/2 sq ft Pressure to which they are adjusted 205 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" (horiz) dia. of boilers 16 1/2" Length 12 1/2" Material of shell plates steel
 Thickness 1 1/2" Range of tensile strength 285-325 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR
 long. seams DBS, TR Diameter of rivet holes in long. seams 15" Pitch of rivets 10 1/16" Lap of plates or width of butt straps 19 1/8"
 Per centages of strength of longitudinal joint rivets 95 Working pressure of shell by rules 200 Size of manhole in shell 16" x 12"
 plates 85
 Size of compensating ring 9" x 1 1/2" No. and Description of Furnaces in each Boiler 4 Deighton Material steel Outside diameter 3 5/8"
 Length of plain part top Thickness of plates crown 9" Description of longitudinal joint welded No. of strengthening rings
 bottom 10"
 Working pressure of furnace by the rules 211 Combustion chamber plates: Material steel Thickness: Sides 3/4" Back 1 1/2" Top 3/4" Bottom 3/4"
 Pitch of stays to ditto: Sides 11 1/4" x 8 3/8" Back 9 1/2" x 8" Top 10 3/8" x 8" If stays are fitted with nuts or riveted heads nuts in ends Working pressure by rules 202
 Material of stays steel Diameter at smallest part 2 1/2" Area supported by each stay 160" Working pressure by rules 200 End plates in steam space
 Material steel Thickness 1 1/2" Pitch of stays 20 1/2" x 17" How are stays secured on end Working pressure by rules 200 Material of stays steel
 Diameter at smallest part 7 1/2" Area supported by each stay 3490" Working pressure by rules 211 Material of Front plates at bottom steel
 Thickness 1 1/2" Material of Lower back plate steel Thickness 3/4" Greatest pitch of stays 13 1/4" x 9 1/2" Working pressure of plate by rules 202
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front 1 1/2" Back 7/8" Mean pitch of stays 9"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 200 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 2 @ 7 1/8" x 1" Length as per rule 33" Distance apart 8" Number and pitch of stays in each 2 @ 10 3/4"
 Working pressure by rules 204 Steam dome: description of joint to shell none 1/10 of strength of joint Diameter
 Thickness of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets
 Working pressure of shell by rules Crown plates: Thickness How stayed

W1630-0057

Lloyd's Register
Foundation

SUPERHEATER. Type Schmidt Date of Approval of Plan 6-9-21 (Submitted from Rich) Tested by Hydraulic Pressure to 600 lbs
Date of Test 7-12-21 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes
Diameter of Safety Valve 1 1/2" Pressure to which each is adjusted 208 Is Easing Gear fitted yes

IS A DONKEY BOILER FITTED? yes If so, is a report now forwarded? yes

SPARE GEAR. State the articles supplied:— Turbines: 2 sets of bearing bushes for rotor, to the bolts (or studs) & nuts for casing joint, 1 set of coupling bolts, 1 set of Michell Thrust pads, 2 Bolts & nuts (or studs) for each size fitted to rotor bearings, 2 for each bearing, 1 gland box complete, Diaphragm gland rings, Gears:— 1 primary pinion & flexible shaft, 1 set of bearing bushes main shaft, 2 ditto for 1st & 2nd Red. pinions, 2 ditto for 1st & 2nd Red. wheel shafts, 2 Bolts (or studs) & nuts for each size & for each bearing fitted, 1 set of coupling bolts, to the gear case joint bolts (or studs) & nuts.
General:— 3 thermocouples, 1 Spring for each size fitted, Lubricating Pumps, with 1 set of valves, 1 Bucket, 1 pump rod, 1 piston rod & nut, Rotoplunger Pump, 1 set plungers, 1 Centre block, 1 Rotor bearing plate, Oil Cooler, 1 nest of tubes.

The foregoing is a correct description.

METROPOLITAN-VICKERS ELECTRICAL CO. LTD.
TRAFFORD PARK,
MANCHESTER.

Simpson
Engineer S.O.
Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1921. 12/8, 22/9, 10/10, 19/10, 26/10, 9/11, 16/11, 24/11, 1922. 3/1, 5/1, 6/1, 11/1, 25/1, 28/1, 7/2, 10/2, 22/2, 27/2, 13/3, 23/3, 28/3, 10/4.
During erection on board vessel -- 1922. 1/10, 22/10, 11/11, 10/12, 22/12, 19/1, 16/2, 15/3, 10/4, 15/4, 22/4, 29/4, 6/5, 13/5, 20/5, 27/5, 3/6, 10/6, 17/6, 24/6, 1/7, 8/7, 15/7, 22/7, 29/7, 5/8, 12/8, 19/8, 26/8, 2/9, 9/9, 16/9, 23/9, 30/9, 7/10, 14/10, 21/10, 28/10, 4/11, 11/11, 18/11, 25/11, 2/12, 9/12, 16/12, 23/12, 30/12, 6/1, 13/1, 20/1, 27/1, 3/2, 10/2, 17/2, 24/2, 3/3, 10/3, 17/3, 24/3, 31/3, 7/4, 14/4, 21/4, 28/4, 5/5, 12/5, 19/5, 26/5, 2/6, 9/6, 16/6, 23/6, 30/6, 7/7, 14/7, 21/7, 28/7, 4/8, 11/8, 18/8, 25/8, 1/9, 8/9, 15/9, 22/9, 29/9, 6/10, 13/10, 20/10, 27/10, 3/11, 10/11, 17/11, 24/11, 1/12, 8/12, 15/12, 22/12, 29/12, 5/1, 12/1, 19/1, 26/1, 2/2, 9/2, 16/2, 23/2, 30/2, 6/3, 13/3, 20/3, 27/3, 3/4, 10/4, 17/4, 24/4, 31/4, 7/5, 14/5, 21/5, 28/5, 4/6, 11/6, 18/6, 25/6, 2/7, 9/7, 16/7, 23/7, 30/7, 6/8, 13/8, 20/8, 27/8, 3/9, 10/9, 17/9, 24/9, 1/10, 8/10, 15/10, 22/10, 29/10, 5/11, 12/11, 19/11, 26/11, 2/12, 9/12, 16/12, 23/12, 30/12, 6/1, 13/1, 20/1, 27/1, 3/2, 10/2, 17/2, 24/2, 31/2, 7/3, 14/3, 21/3, 28/3, 4/4, 11/4, 18/4, 25/4, 2/5, 9/5, 16/5, 23/5, 30/5, 6/6, 13/6, 20/6, 27/6, 3/7, 10/7, 17/7, 24/7, 31/7, 7/8, 14/8, 21/8, 28/8, 4/9, 11/9, 18/9, 25/9, 2/10, 9/10, 16/10, 23/10, 30/10, 6/11, 13/11, 20/11, 27/11, 3/12, 10/12, 17/12, 24/12, 31/12, 7/1, 14/1, 21/1, 28/1, 4/2, 11/2, 18/2, 25/2, 2/3, 9/3, 16/3, 23/3, 30/3, 6/4, 13/4, 20/4, 27/4, 3/5, 10/5, 17/5, 24/5, 31/5, 7/6, 14/6, 21/6, 28/6, 4/7, 11/7, 18/7, 25/7, 2/8, 9/8, 16/8, 23/8, 30/8, 6/9, 13/9, 20/9, 27/9, 3/10, 10/10, 17/10, 24/10, 31/10, 7/11, 14/11, 21/11, 28/11, 4/12, 11/12, 18/12, 25/12, 2/1, 9/1, 16/1, 23/1, 30/1, 6/2, 13/2, 20/2, 27/2, 3/3, 10/3, 17/3, 24/3, 31/3, 7/4, 14/4, 21/4, 28/4, 4/5, 11/5, 18/5, 25/5, 2/6, 9/6, 16/6, 23/6, 30/6, 6/7, 13/7, 20/7, 27/7, 3/8, 10/8, 17/8, 24/8, 31/8, 7/9, 14/9, 21/9, 28/9, 4/10, 11/10, 18/10, 25/10, 2/11, 9/11, 16/11, 23/11, 30/11, 6/12, 13/12, 20/12, 27/12, 3/1, 10/1, 17/1, 24/1, 31/1, 7/2, 14/2, 21/2, 28/2, 4/3, 11/3, 18/3, 25/3, 2/4, 9/4, 16/4, 23/4, 30/4, 6/5, 13/5, 20/5, 27/5, 3/6, 10/6, 17/6, 24/6, 31/6, 7/7, 14/7, 21/7, 28/7, 4/8, 11/8, 18/8, 25/8, 2/9, 9/9, 16/9, 23/9, 30/9, 6/10, 13/10, 20/10, 27/10, 3/11, 10/11, 17/11, 24/11, 31/11, 7/12, 14/12, 21/12, 28/12, 4/1, 11/1, 18/1, 25/1, 2/2, 9/2, 16/2, 23/2, 30/2, 6/3, 13/3, 20/3, 27/3, 3/4, 10/4, 17/4, 24/4, 31/4, 7/5, 14/5, 21/5, 28/5, 4/6, 11/6, 18/6, 25/6, 2/7, 9/7, 16/7, 23/7, 30/7, 6/8, 13/8, 20/8, 27/8, 3/9, 10/9, 17/9, 24/9, 31/9, 7/10, 14/10, 21/10, 28/10, 4/11, 11/11, 18/11, 25/11, 2/12, 9/12, 16/12, 23/12, 30/12, 6/1, 13/1, 20/1, 27/1, 3/2, 10/2, 17/2, 24/2, 31/2, 7/3, 14/3, 21/3, 28/3, 4/4, 11/4, 18/4, 25/4, 2/5, 9/5, 16/5, 23/5, 30/5, 6/6, 13/6, 20/6, 27/6, 3/7, 10/7, 17/7, 24/7, 31/7, 7/8, 14/8, 21/8, 28/8, 4/9, 11/9, 18/9, 25/9, 2/10, 9/10, 16/10, 23/10, 30/10, 6/11, 13/11, 20/11, 27/11, 3/12, 10/12, 17/12, 24/12, 31/12, 7/1, 14/1, 21/1, 28/1, 4/2, 11/2, 18/2, 25/2, 2/3, 9/3, 16/3, 23/3, 30/3, 6/4, 13/4, 20/4, 27/4, 3/5, 10/5, 17/5, 24/5, 31/5, 7/6, 14/6, 21/6, 28/6, 4/7, 11/7, 18/7, 25/7, 2/8, 9/8, 16/8, 23/8, 30/8, 6/9, 13/9, 20/9, 27/9, 3/10, 10/10, 17/10, 24/10, 31/10, 7/11, 14/11, 21/11, 28/11, 4/12, 11/12, 18/12, 25/12, 2/1, 9/1, 16/1, 23/1, 30/1, 6/2, 13/2, 20/2, 27/2, 3/3, 10/3, 17/3, 24/3, 31/3, 7/4, 14/4, 21/4, 28/4, 4/5, 11/5, 18/5, 25/5, 2/6, 9/6, 16/6, 23/6, 30/6, 6/7, 13/7, 20/7, 27/7, 3/8, 10/8, 17/8, 24/8, 31/8, 7/9, 14/9, 21/9, 28/9, 4/10, 11/10, 18/10, 25/10, 2/11, 9/11, 16/11, 23/11, 30/11, 6/12, 13/12, 20/12, 27/12, 3/1, 10/1, 17/1, 24/1, 31/1, 7/2, 14/2, 21/2, 28/2, 4/3, 11/3, 18/3, 25/3, 2/4, 9/4, 16/4, 23/4, 30/4, 6/5, 13/5, 20/5, 27/5, 3/6, 10/6, 17/6, 24/6, 31/6, 7/7, 14/7, 21/7, 28/7, 4/8, 11/8, 18/8, 25/8, 2/9, 9/9, 16/9, 23/9, 30/9, 6/10, 13/10, 20/10, 27/10, 3/11, 10/11, 17/11, 24/11, 31/11, 7/12, 14/12, 21/12, 28/12, 4/1, 11/1, 18/1, 25/1, 2/2, 9/2, 16/2, 23/2, 30/2, 6/3, 13/3, 20/3, 27/3, 3/4, 10/4, 17/4, 24/4, 31/4, 7/5, 14/5, 21/5, 28/5, 4/6, 11/6, 18/6, 25/6, 2/7, 9/7, 16/7, 23/7, 30/7, 6/8, 13/8, 20/8, 27/8, 3/9, 10/9, 17/9, 24/9, 31/9, 7/10, 14/10, 21/10, 28/10, 4/11, 11/11, 18/11, 25/11, 2/12, 9/12, 16/12, 23/12, 30/12, 6/1, 13/1, 20/1, 27/1, 3/2, 10/2, 17/2, 24/2, 31/2, 7/3, 14/3, 21/3, 28/3, 4/4, 11/4, 18/4, 25/4, 2/5, 9/5, 16/5, 23/5, 30/5, 6/6, 13/6, 20/6, 27/6, 3/7, 10/7, 17/7, 24/7, 31/7, 7/8, 14/8, 21/8, 28/8, 4/9, 11/9, 18/9, 25/9, 2/10, 9/10, 16/10, 23/10, 30/10, 6/11, 13/11, 20/11, 27/11, 3/12, 10/12, 17/12, 24/12, 31/12, 7/1, 14/1, 21/1, 28/1, 4/2, 11/2, 18/2, 25/2, 2/3, 9/3, 16/3, 23/3, 30/3, 6/4, 13/4, 20/4, 27/4, 3/5, 10/5, 17/5, 24/5, 31/5, 7/6, 14/6, 21/6, 28/6, 4/7, 11/7, 18/7, 25/7, 2/8, 9/8, 16/8, 23/8, 30/8, 6/9, 13/9, 20/9, 27/9, 3/10, 10/10, 17/10, 24/10, 31/10, 7/11, 14/11, 21/11, 28/11, 4/12, 11/12, 18/12, 25/12, 2/1, 9/1, 16/1, 23/1, 30/1, 6/2, 13/2, 20/2, 27/2, 3/3, 10/3, 17/3, 24/3, 31/3, 7/4, 14/4, 21/4, 28/4, 4/5, 11/5, 18/5, 25/5, 2/6, 9/6, 16/6, 23/6, 30/6, 6/7, 13/7, 20/7, 27/7, 3/8, 10/8, 17/8, 24/8, 31/8, 7/9, 14/9, 21/9, 28/9, 4/10, 11/10, 18/10, 25/10, 2/11, 9/11, 16/11, 23/11, 30/11, 6/12, 13/12, 20/12, 27/12, 3/1, 10/1, 17/1, 24/1, 31/1, 7/2, 14/2, 21/2, 28/2, 4/3, 11/3, 18/3, 25/3, 2/4, 9/4, 16/4, 23/4, 30/4, 6/5, 13/5, 20/5, 27/5, 3/6, 10/6, 17/6, 24/6, 31/6, 7/7, 14/7, 21/7, 28/7, 4/8, 11/8, 18/8, 25/8, 2/9, 9/9, 16/9, 23/9, 30/9, 6/10, 13/10, 20/10, 27/10, 3/11, 10/11, 17/11, 24/11, 31/11, 7/12, 14/12, 21/12, 28/12, 4/1, 11/1, 18/1, 25/1, 2/2, 9/2, 16/2, 23/2, 30/2, 6/3, 13/3, 20/3, 27/3, 3/4, 10/4, 17/4, 24/4, 31/4, 7/5, 14/5, 21/5, 28/5, 4/6, 11/6, 18/6, 25/6, 2/7, 9/7, 16/7, 23/7, 30/7, 6/8, 13/8, 20/8, 27/8, 3/9, 10/9, 17/9, 24/9, 31/9, 7/10, 14/10, 21/10, 28/10, 4/11, 11/11, 18/11, 25/11, 2/12, 9/12, 16/12, 23/12, 30/12, 6/1, 13/1, 20/1, 27/1, 3/2, 10/2, 17/2, 24/2, 31/2, 7/3, 14/3, 21/3, 28/3, 4/4, 11/4, 18/4, 25/4, 2/5, 9/5, 16/5, 23/5, 30/5, 6/6, 13/6, 20/6, 27/6, 3/7, 10/7, 17/7, 24/7, 31/7, 7/8, 14/8, 21/8, 28/8, 4/9, 11/9, 18/9, 25/9, 2/10, 9/10, 16/10, 23/10, 30/10, 6/11, 13/11, 20/11, 27/11, 3/12, 10/12, 17/12, 24/12, 31/12, 7/1, 14/1, 21/1, 28/1, 4/2, 11/2, 18/2, 25/2, 2/3, 9/3, 16/3, 23/3, 30/3, 6/4, 13/4, 20/4, 27/4, 3/5, 10/5, 17/5, 24/5, 31/5, 7/6, 14/6, 21/6, 28/6, 4/7, 11/7, 18/7, 25/7, 2/8, 9/8, 16/8, 23/8, 30/8, 6/9, 13/9, 20/9, 27/9, 3/10, 10/10, 17/10, 24/10, 31/10, 7/11, 14/11, 21/11, 28/11, 4/12, 11/12, 18/12, 25/12, 2/1, 9/1, 16/1, 23/1, 30/1, 6/2, 13/2, 20/2, 27/2, 3/3, 10/3, 17/3, 24/3, 31/3, 7/4, 14/4, 21/4, 28/4, 4/5, 11/5, 18/5, 25/5, 2/6, 9/6, 16/6, 23/6, 30/6, 6/7, 13/7, 20/7, 27/7, 3/8, 10/8, 17/8, 24/8, 31/8, 7/9, 14/9, 21/9, 28/9, 4/10, 11/10, 18/10, 25/10, 2/11, 9/11, 16/11, 23/11, 30/11, 6/12, 13/12, 20/12, 27/12, 3/1, 10/1, 17/1, 24/1, 31/1, 7/2, 14/2, 21/2, 28/2, 4/3, 11/3, 18/3, 25/3, 2/4, 9/4, 16/4, 23/4, 30/4, 6/5, 13/5, 20/5, 27/5, 3/6, 10/6, 17/6, 24/6, 31/6, 7/7, 14/7, 21/7, 28/7, 4/8, 11/8, 18/8, 25/8, 2/9, 9/9, 16/9, 23/9, 30/9, 6/10, 13/10, 20/10, 27/10, 3/11, 10/11, 17/11, 24/11, 31/11, 7/12, 14/12, 21/12, 28/12, 4/1, 11/1, 18/1, 25/1, 2/2, 9/2, 16/2, 23/2, 30/2, 6/3, 13/3, 20/3, 27/3, 3/4, 10/4, 17/4, 24/4, 31/4, 7/5, 14/5, 21/5, 28/5, 4/6, 11/6, 18/6, 25/6, 2/7, 9/7, 16/7, 23/7, 30/7, 6/8, 13/8, 20/8, 27/8, 3/9, 10/9, 17/9, 24/9, 31/9, 7/10, 14/10, 21/10, 28/10, 4/11, 11/11, 18/11, 25/11, 2/12, 9/12, 16/12, 23/12, 30/12, 6/1, 13/1, 20/1, 27/1, 3/2, 10/2, 17/2, 24/2, 31/2, 7/3, 14/3, 21/3, 28/3, 4/4, 11/4, 18/4, 25/4, 2/5, 9/5, 16/5, 23/5, 30/5, 6/6, 13/6, 20/6, 27/6, 3/7, 10/7, 17/7, 24/7, 31/7, 7/8, 14/8, 21/8, 28/8, 4/9, 11/9, 18/9, 25/9, 2/10, 9/10, 16/10, 23/10, 30/10, 6/11, 13/11, 20/11, 27/11, 3/12, 10/12, 17/12, 24/12, 31/12, 7/1, 14/1, 21/1, 28/1, 4/2, 11/2, 18/2, 25/2, 2/3, 9/3, 16/3, 23/3, 30/3, 6/4, 13/4, 20/4, 27/4, 3/5, 10/5, 17/5, 24/5, 31/5, 7/6, 14/6, 21/6, 28/6, 4/7, 11/7, 18/7, 25/7, 2/8, 9/8, 16/8, 23/8, 30/8, 6/9, 13/9, 20/9, 27/9, 3/10, 10/10, 17/10, 24/10, 31/10, 7/11, 14/11, 21/11, 28/11, 4/12, 11/12, 18/12, 25/12, 2/1, 9/1, 16/1, 23/1, 30/1, 6/2, 13/2, 20/2, 27/2, 3/3, 10/3, 17/3, 24/3, 31/3, 7/4, 14/4, 21/4, 28/4, 4/5, 11/5, 18/5, 25/5, 2/6, 9/6, 16/6, 23/6, 30/6, 6/7, 13/7, 20/7, 27/7, 3/8, 10/8, 17/8, 24/8, 31/8, 7/9, 14/9, 21/9, 28/9, 4/10, 11/10, 18/10, 25/10, 2/11, 9/11, 16/11, 23/11, 30/11, 6/12, 13/12, 20/12, 27/12, 3/1, 10/1, 17/1, 24/1, 31/1, 7/2, 14/2, 21/2, 28/2, 4/3, 11/3, 18/3, 25/3, 2/4, 9/4, 16/4, 23/4, 30/4, 6/5, 13/5, 20/5, 27/5, 3/6, 10/6, 17/6, 24/6, 31/6, 7/7, 14/7, 21/7, 28/7, 4/8, 11/8, 18/8, 25/8, 2/9, 9/9, 16/9, 23/9, 30/9, 6/10, 13/10, 20/10, 27/10, 3/11, 10/11, 17/11, 24/11, 31/11, 7/12, 14/12, 21/12, 28/12, 4/1, 11/1, 18/1, 25/1, 2/2, 9/2, 16/2, 23/2, 30/2, 6/3, 13/3, 20/3, 27/3, 3/4, 10/4, 17/4, 24/4, 31/4, 7/5, 14/5, 21/5, 28/5, 4/6, 11/6, 18/6, 25/6, 2/7, 9/7, 16/7, 23/7, 30/7, 6/8, 13/8, 20/8, 27/8, 3/9, 10/9, 17/9, 24/9, 31/9, 7/10, 14/10, 21/10, 28/10, 4/11, 11/11, 18/11, 25/11, 2/12, 9/12, 16/12, 23/12, 30/12, 6/1, 13/1, 20/1, 27/1, 3/2, 10/2, 17/2, 24/2, 31/2, 7/3, 14/3, 21/3, 28/3, 4/4, 11/4, 18/4, 25/4, 2/5, 9/5, 16/5, 23/5, 30/5, 6/6, 13/6, 20/6, 27/6, 3/7, 10/7, 17/7, 24/7, 31/7, 7/8, 14/8, 21/8, 28/8, 4/9, 11/9, 18/9, 25/9, 2/10, 9/10, 16/10, 23/10, 30/10, 6/11, 13/11, 20/11, 27/11, 3/12, 10/12, 17/12, 24/12, 31/12, 7/1, 14/1, 21/1, 28/1, 4/2, 11/2, 18/2, 25/2, 2/3, 9/3, 16/3, 23/3, 30/3, 6/4, 13/4, 20/4, 27/4, 3/5, 10/5, 17/5, 24/5, 31/5, 7/6, 14/6, 21/6, 28/6, 4/7, 11/7, 18/7, 25/7, 2/8, 9/8, 16/8, 23/8, 30/8, 6/9, 13/9, 20/9, 27/9, 3/10, 10/10, 17/10, 24/10, 31/10, 7/11, 14/11, 21/11, 28/11, 4/12, 11/12, 18/12, 25/12, 2/1, 9/1, 16/1, 23/1, 30/1, 6/2, 13/2, 20/2, 27/2, 3/3, 10/3, 17/3, 24/3, 31/3, 7/4, 14/4, 21/4, 28/4, 4/5, 11/5, 18/5, 25/5, 2/6, 9/6, 16/6, 23/6, 30/6, 6/7, 13/7, 20/7, 27/7, 3/8, 10/8, 17/8, 24/8, 31/8, 7/9, 14/9, 21/9, 28/9, 4/10, 11/10, 18/10, 25/10, 2/11, 9/11, 16/11, 23/11, 30/11, 6/12, 13/12, 20/12, 27/12, 3/1, 10/1, 17/1, 24/1, 31/1, 7/2, 14/2, 21/2, 28/2, 4/3, 11/3, 18/3, 25/3, 2/4, 9/4, 16/4, 23/4, 30/4, 6/5, 13/5, 20/5, 27/5, 3/6, 10/6, 17/6, 24/6, 31/6, 7/7, 14/7, 21/7, 28/7, 4/8, 11/8, 18/8, 25/8, 2/9, 9/9, 16/9, 23/9, 30/9, 6/10, 13/10, 20/10, 27/10, 3/11, 10/11, 17/11, 24/11, 31/11, 7/12, 14/12, 21/12, 28/12, 4/1, 11/1, 18/1, 25/1, 2/2, 9/2, 16/2, 23/2, 30/2, 6/3, 13/3, 20/3, 27/3, 3/4, 10/4, 17/4, 24/4, 31/4, 7/5, 14/5, 21/5, 28/5, 4/6, 11/6, 18/6, 25/6, 2/7, 9/7, 16/7, 23/7, 30/7, 6/8, 13/8, 20/8, 27/8, 3/9, 10/9, 17/9, 24/9, 31/9, 7/10, 14/10, 21/10, 28/10, 4/11, 11/11, 18/11, 25/11, 2/12, 9/12, 16/12, 23/12, 30/12, 6/1, 13/1, 20/1, 27/1, 3/2, 10/2, 17/2, 24/2, 31/2, 7/3, 14/3, 21/3, 28/3, 4/4, 11/4, 18/4, 25/4, 2/5, 9/5, 16/5, 23/5, 30/5, 6/6, 13/6, 20/6, 27/6, 3/7, 10/7, 17/7, 24/7, 31/7, 7/8, 14/8, 21/8, 28/8, 4/9, 11/9, 18/9, 25/9, 2/10, 9/10, 16/10, 23/10, 30/10, 6/11, 13/11, 20/11, 27/11, 3/12, 10/12, 17/12, 24/12, 31/12, 7/1, 14/1, 21/1, 28/1, 4/2, 11/2, 18/2, 25/2, 2/3, 9/3, 16/3, 23/3, 30/3, 6/4, 13/4, 20/4, 27/4, 3/5, 10/5, 17/5, 24/5, 31/5, 7/6, 14/6, 21/6, 28/6, 4/7, 11/7, 18/7, 25/7, 2/8, 9/8, 16/8, 23/8, 30/8, 6/9, 13/9, 20/9, 27/9, 3/10, 10/10, 17/10, 24/10, 31/10, 7/11, 14/11, 21/11, 28/11, 4/12, 11/12, 18/12, 25/12, 2/1, 9/1, 16/1, 23/1, 30/1, 6/2, 13/2, 20/2, 27/2, 3/3, 10/3, 17/3, 24/3, 31/3, 7/4, 14/4, 21/4, 28/4, 4/5, 11/5, 18/5, 25/5, 2/6, 9/6, 16/6, 23/6, 30/6, 6/7, 13/7, 20/7, 27/7, 3/8, 10/8, 17/8, 24/8, 31/8, 7/9, 14/9, 21/9, 28/9, 4/10, 11/10, 18/10, 25/10, 2/11, 9/11, 16/11, 23/11, 30/11, 6/12, 13/12, 20/12, 27/12, 3/1, 10/1, 17/1, 24/1, 31/1, 7/2, 14/2, 21/2, 28/2, 4/3, 11/3, 18/3, 25/3, 2/4, 9/4, 16/4, 23/4, 30/4, 6/5, 13/5, 20/5, 27/5, 3/6, 10/6, 17/6, 24/6, 31/6, 7/7,