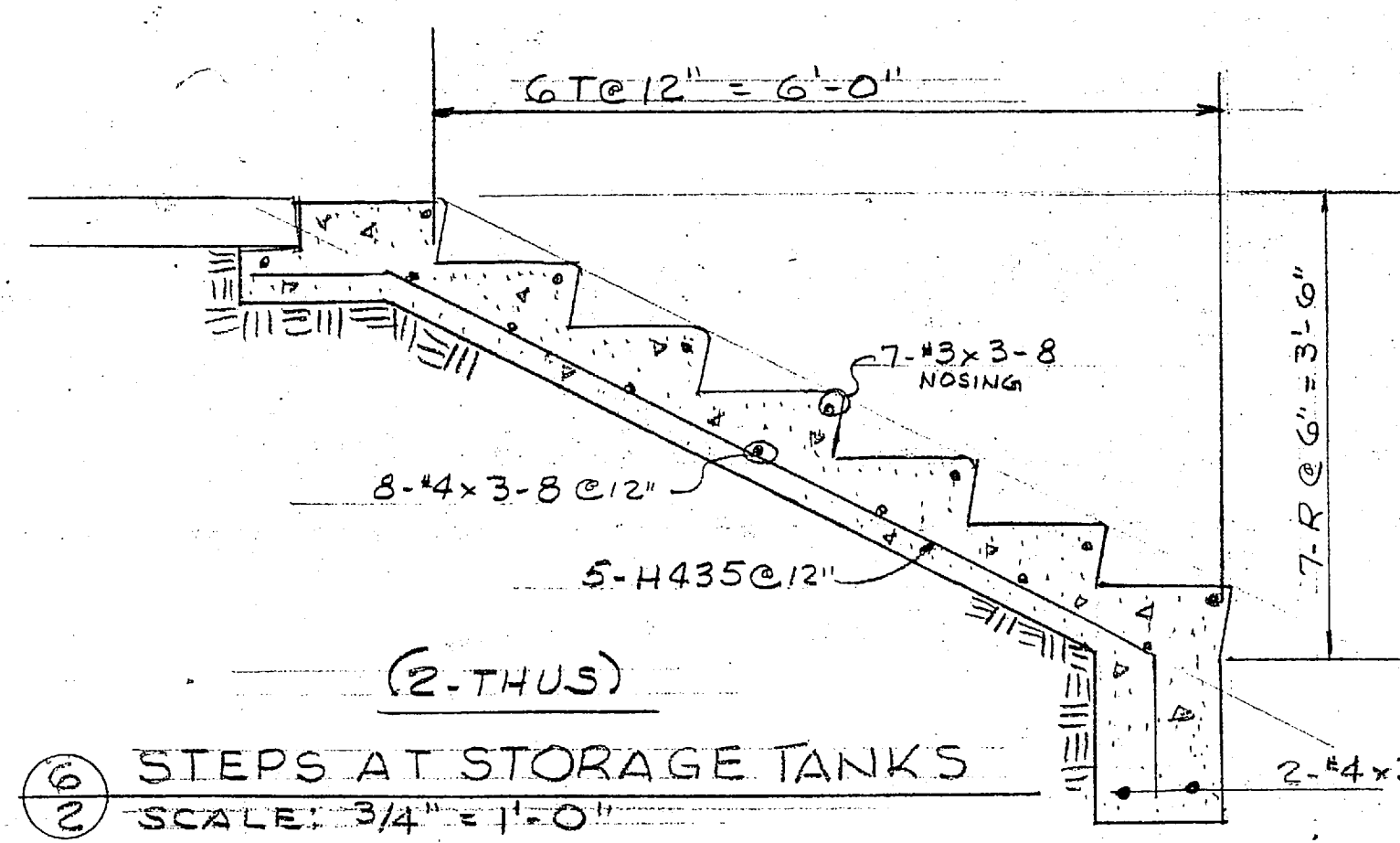


PLAN - BOILER PADS

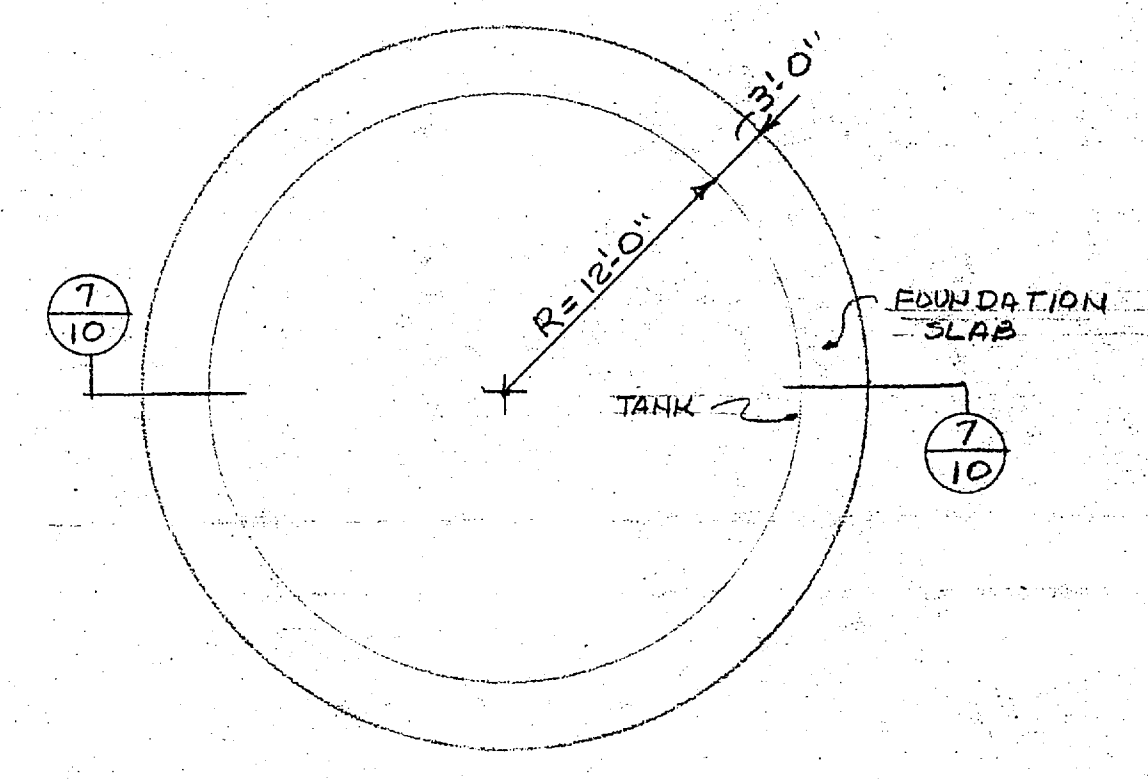
BOILER PAD FLAT SLAB SCHEDULE

NO.	NO.	REINF.	SR.	LOC.	DIR.	REMARKS
3	C1	6-#6x12-0	8"	Bot.	N-S	
2	M1	6-#5x12-0				
3	C2	6-#6x11-6				
2	M2	6-#5x11-6				
3	C3	6-#6x11-9				
2	M3	7-#5x11-9			N-S	
3	C4	6-#4x9-6			E-W	
3	C5	6-#4x10-3				
2	C6	6-#4x11-9				
2	C7	8-#4x11-9				
1	C8	7-#4x9-6				
1	C9	7-#4x10-3				
2	M4	6-#4x9-6				
2	M5	6-#4x10-3				
2	M6	5-#4x11-9	8"	Bot.		
3	T1	8-#7x5-4	6"	Top		
1	T2	10-#7x5-4				
1	T3	8-#7x6-8				
1	T4	10-#7x6-8	6"			
2	M7	8-#6x5-4	7"			
1	M8	6-#6x6-8	7"			
2	M9	6-H423	8"			
2	M10	6-H424				
2	M11	5-H425				
3	T5	6-H423				
1	T6	7-H423				
2	T7	6-H425				
2	T8	8-H425				
3	T9	6-H424				
1	T10	7-H424			E-W	
3	T11	6-H426			N-S	
1	T12	6-H424				
3	T13	7-H426				
1	T14	6-H424				
3	T15	6-H426				
6	M12	6-H426				
2	M13	6-H424				
1	T16	6-H424				
3	T17	6-H427				
3	T18	6-H423				
2	M14	8-H427				
2	M15	8-H423	8"	Top	N-S	

NOT APPROVED UNTIL BOILER IS APPROVED



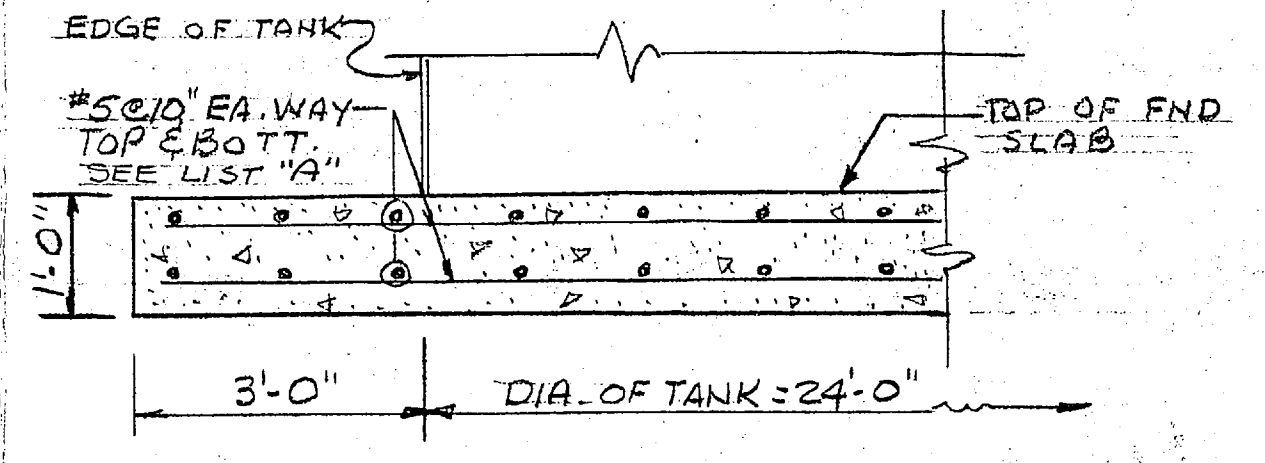
STEPS AT STORAGE TANKS
SCALE: 3/4" = 1'-0"



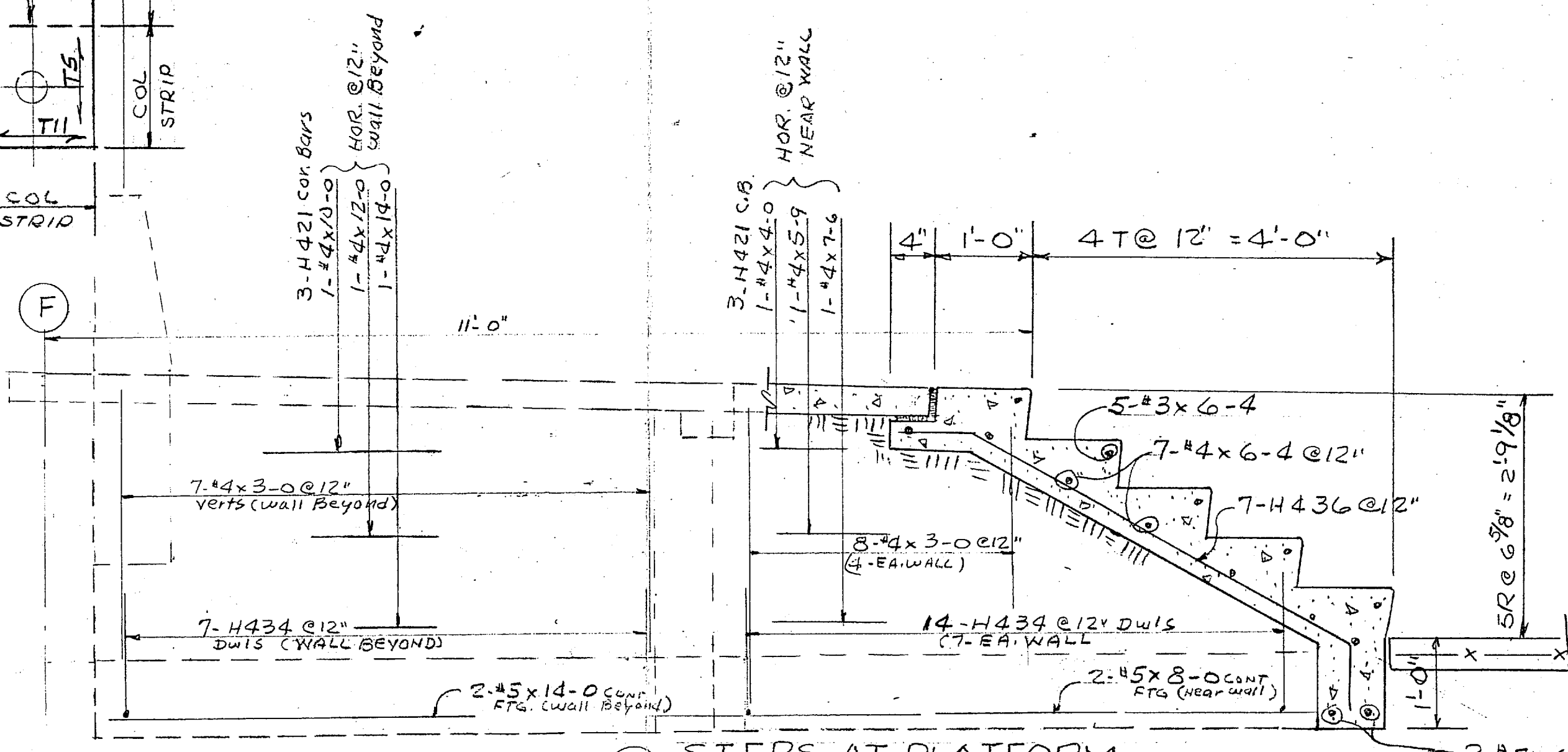
FUEL STORAGE TANK FOUND.
SCALE: 3/4" = 1'-0"
(2-TANKS REQ'D)

LIST 'A'

8-#5x29-6
8-#29-5
8-#29-4
8-#28-1
8-#28-8
8-#27-6
8-#26-8
8-#26-0
8-#24-10
8-#23-8
8-#22-6
8-#22-0
8-#19-0
8-#16-8
8-#10-2
8-#5x3-6



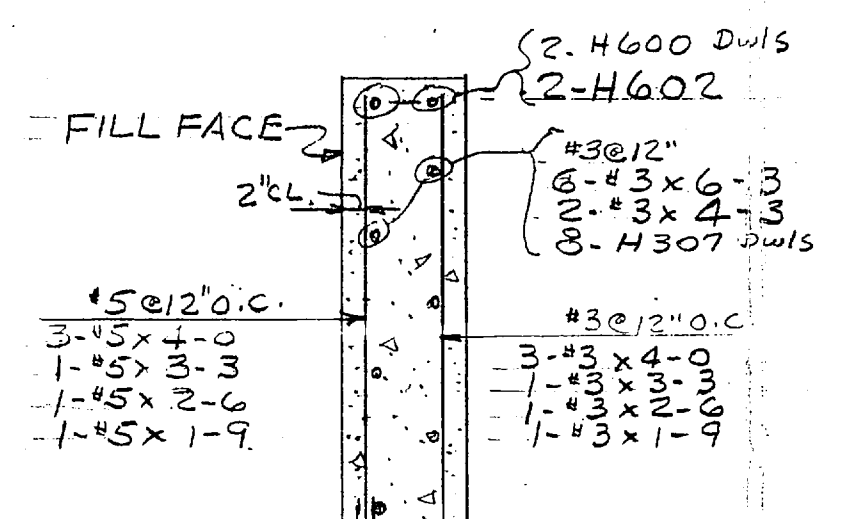
SECT. 7



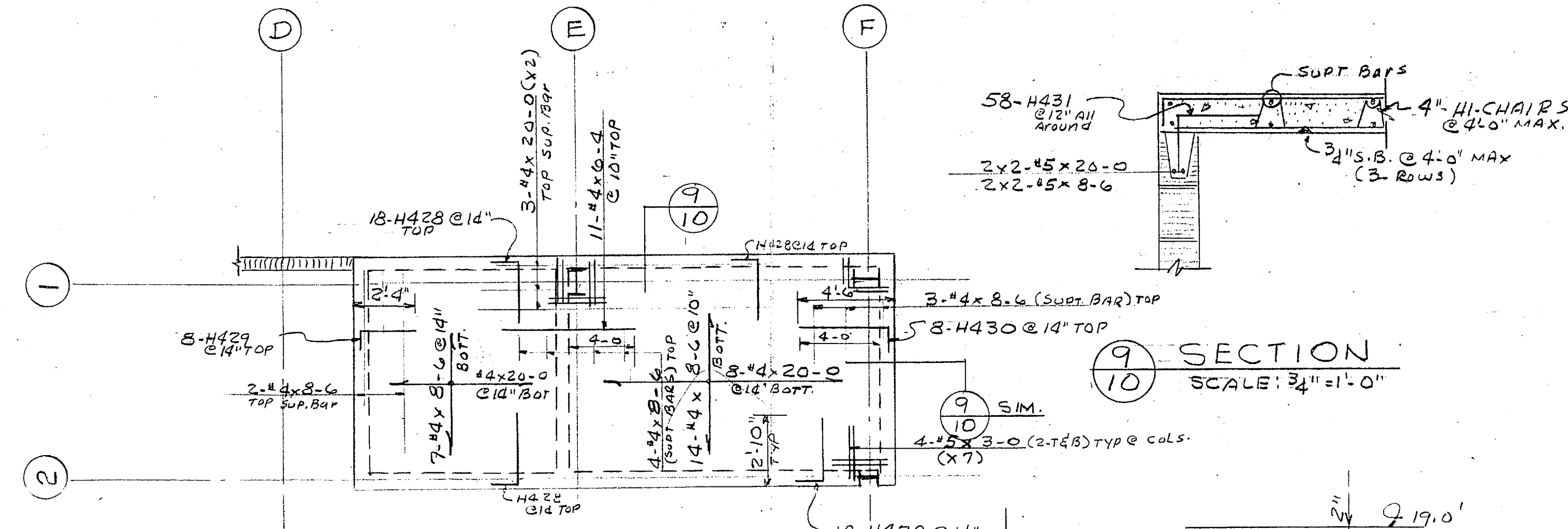
STEPS AT PLATFORM
SCALE: 3/4" = 1'-0"

ATLANTIC DIVISION, NAVAL FACILITIES ENGINEERING COMMAND
RODFORD VI, VA.
APPROVED AS NOTED
SUBJECT TO THE REQUIREMENTS OF
CONTRACT NO. 88307 SPEC. 88309/67
APPROVAL OF MATERIALS AND/OR EQUIPMENT INDICATES COMPLIANCE WITH SPECIFICATION REQUIREMENTS ONLY - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROPER PHYSICAL DIMENSIONS & WEIGHTS, COORDINATION OF TRADES, ETC., AS REQUIRED.
H. N. WALLIN
ADM. SEC. USN
COMNAVTRAVACENCOM
DATE: 31 OCT 1968
A. G. ODELL, JR. & ASSOCIATES
102 WEST TRADE STREET CHARLOTTE, N.C.
CHECKED: [Signature] DATE: 10-30-68

H.66-2
APPROVED AS NOTED
NOT APPROVED
REVISE & RESUBMIT
Approval of Shop and Setting Drawings does not permit departure from contract requirements, for reliance by subcontractor from error in details, dimensions, or other conditions of contract.
ALLEN M. CAMPBELL COMPANY
GENERAL CONTRACTORS, INC.
P.O. Box 1377
Jacksonville, North Carolina 28540
DATE: 10-23-68



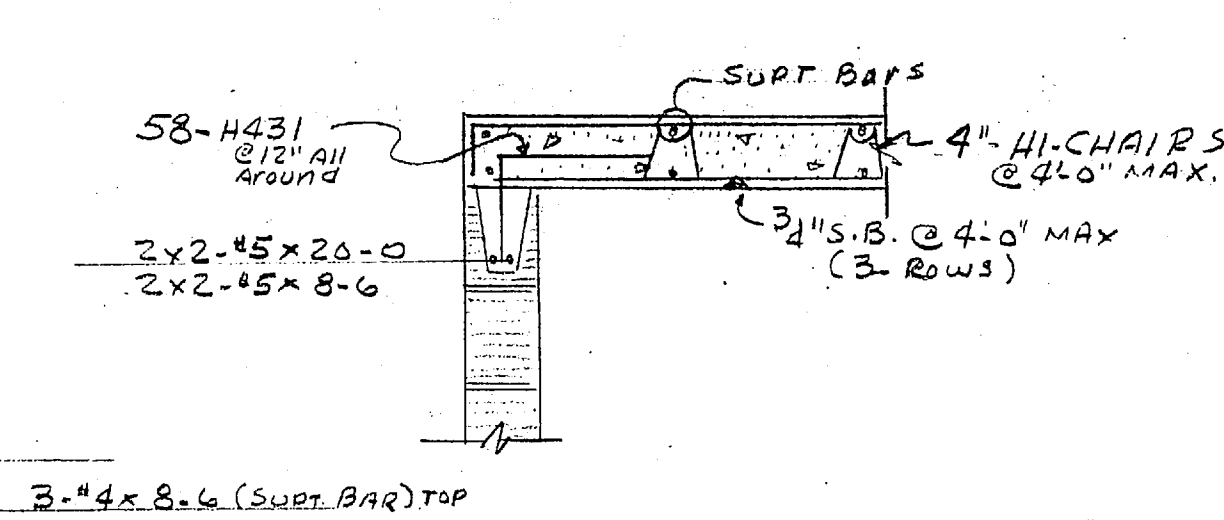
SECTION 8
SCALE: 3/4" = 1'-0"



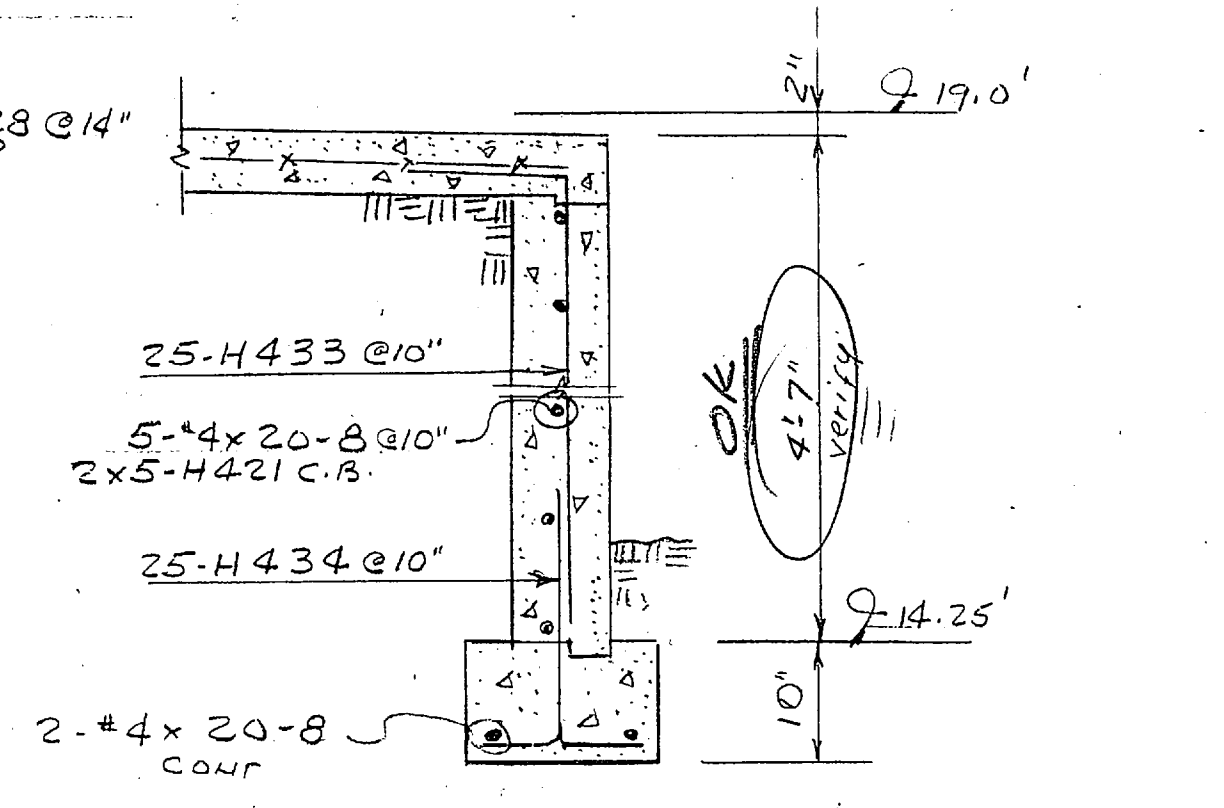
ROOF SLAB OVER OFFICE
SCALE: 1/4" = 1'-0"

MISC. REQUIREMENTS

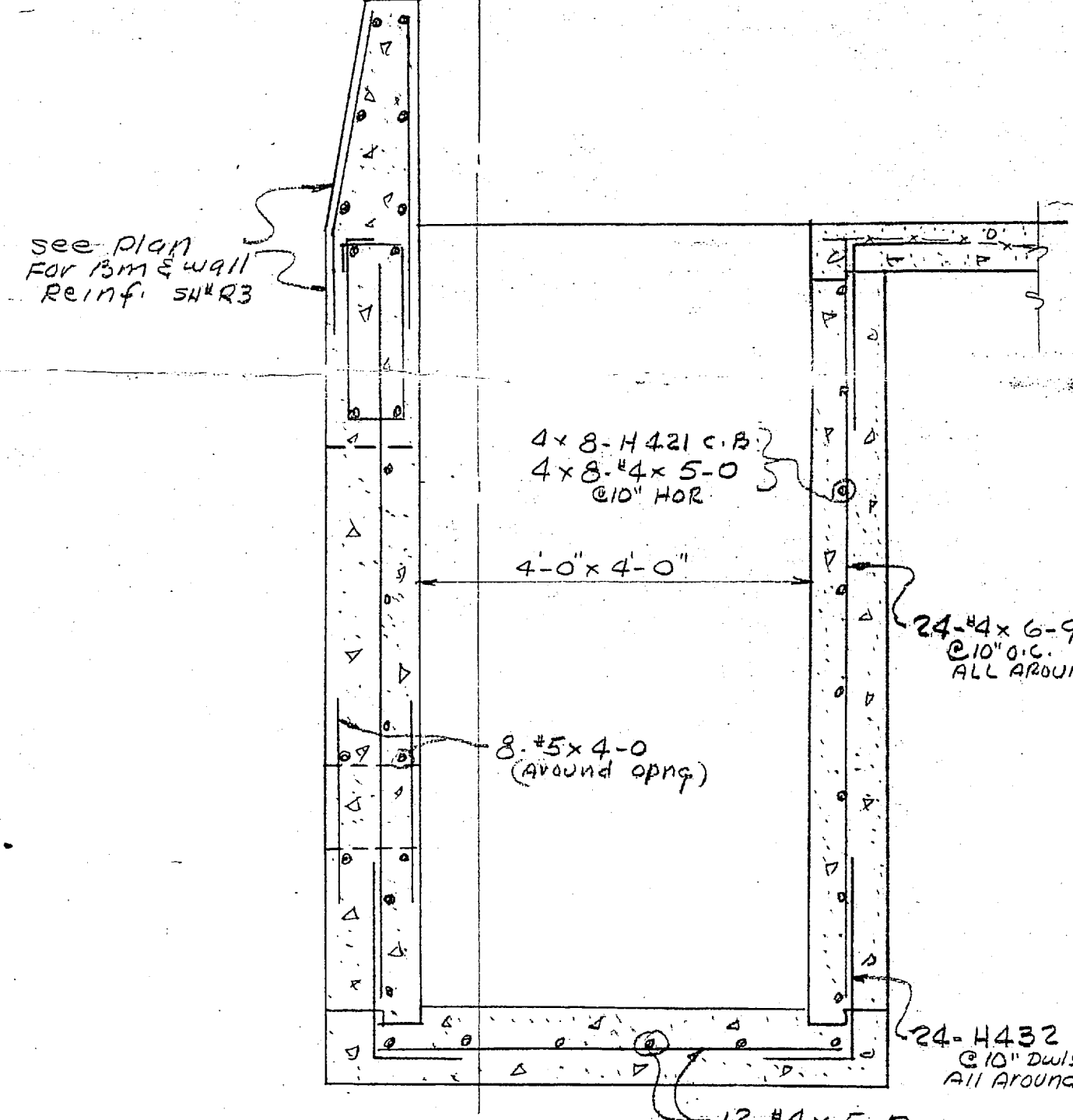
ITEM	Ref. Dwg.	REINF.	REMARKS
PUMP STA. FND	H 4	6-#4x9-0 6-#4x7-0	See sect. (14)
8" C.M.U. LINTELS	H 6	4-#2x20-0	DO. (16)
SIMPLEX SUMP PUMP BASIN	H 12	24-H432 DWTS 24-#4x8-9 VERT 5-#4x30-0 (cut to fit in field)	DO. (17)
FUEL OIL PIPE SUPT.	H 13	32-#4x1-2 24-#4x3-8	DO. (18)



SECTION 9
SCALE: 3/4" = 1'-0"



SECTION 10



MECH. PIT DETAIL
SCALE: 3/4" = 1'-0"

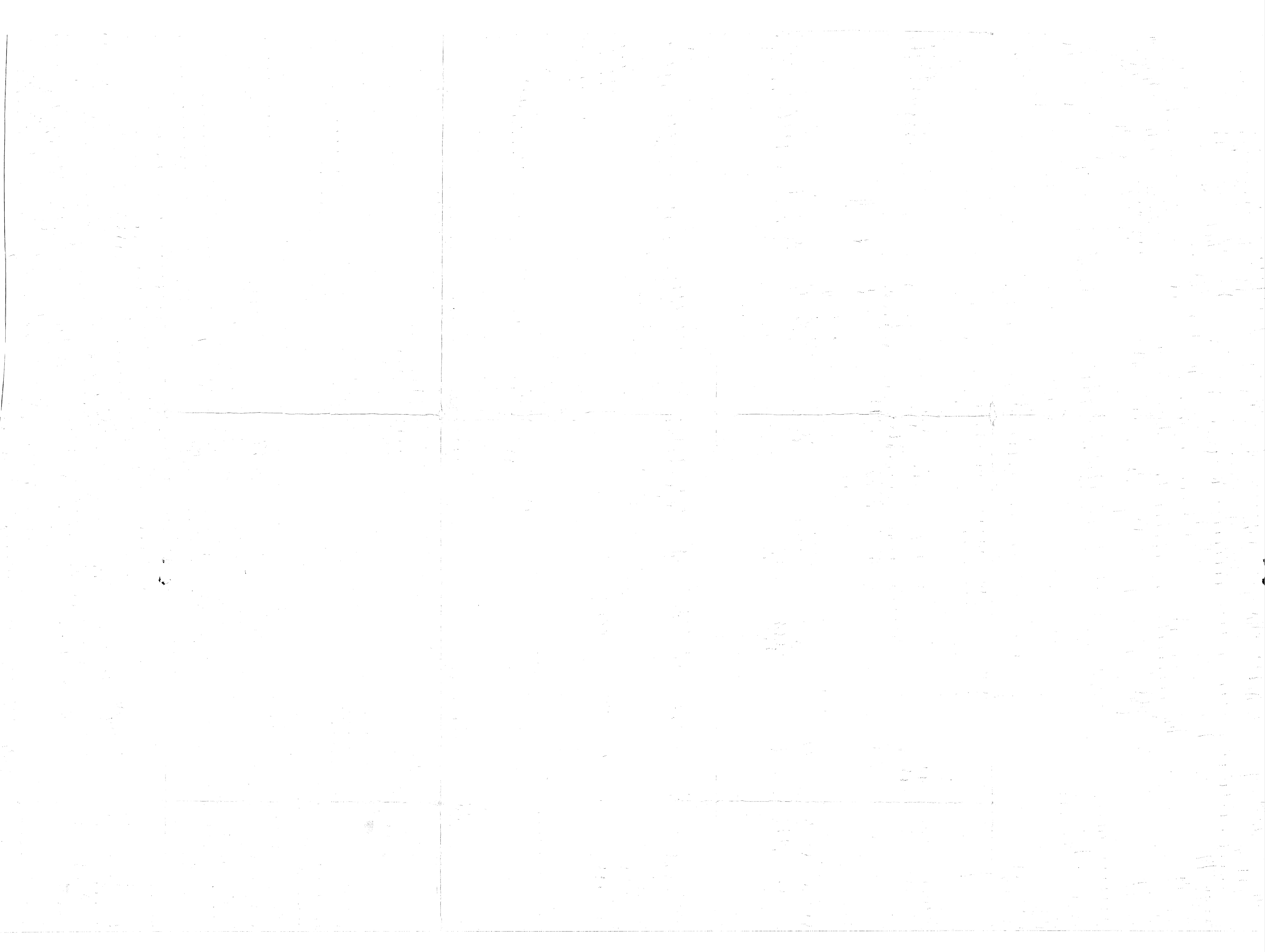
ACCESSORIES - TAG, HEAT, PLANT
40-L.F. 3/4" SLAB BOLSTER *
30-PCS 4" IND. HI-CHAIRS *
* GALV. WIRE LEGS *

FOR APPROVAL
DATE: OCT 17 1968

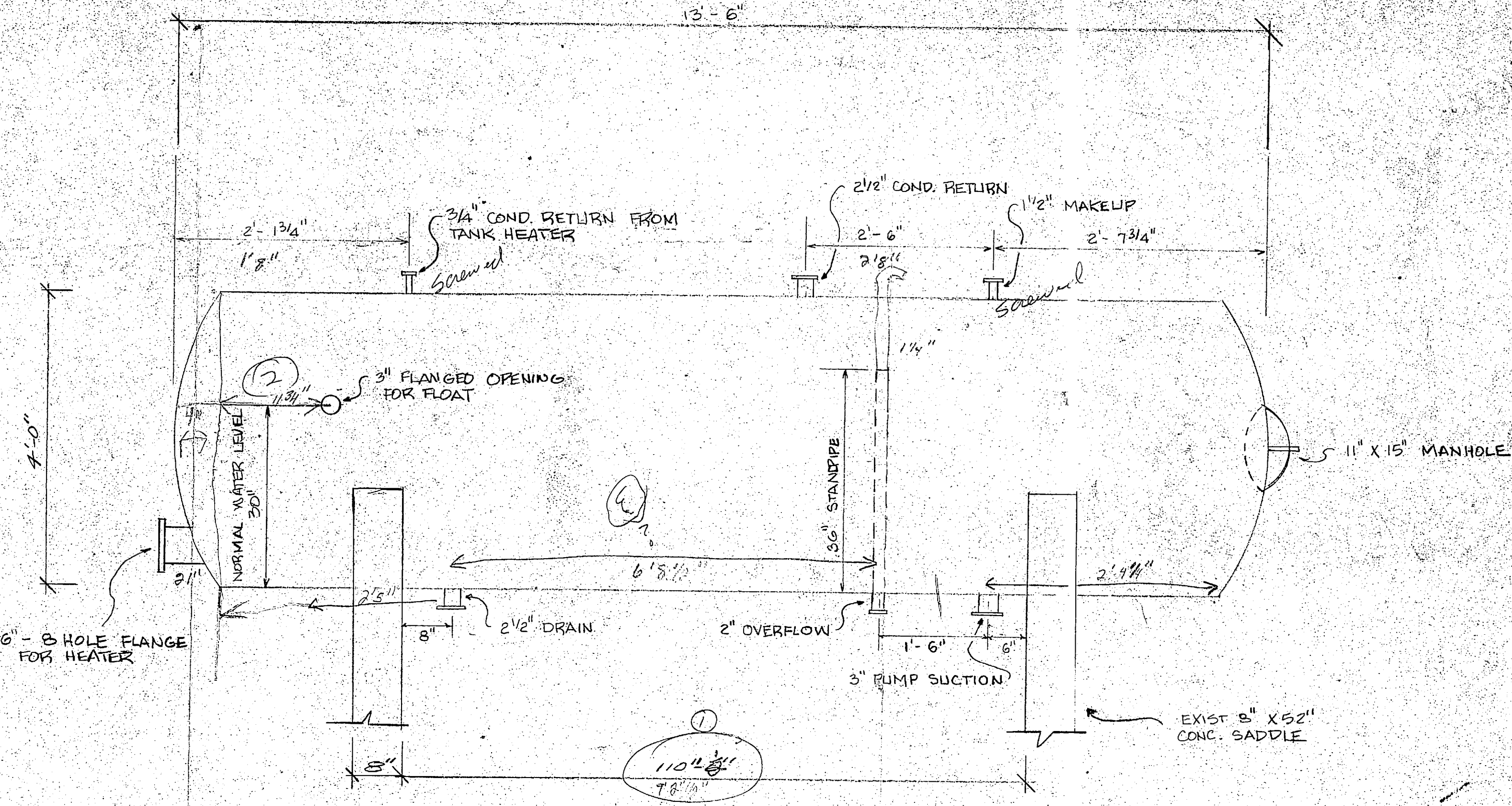
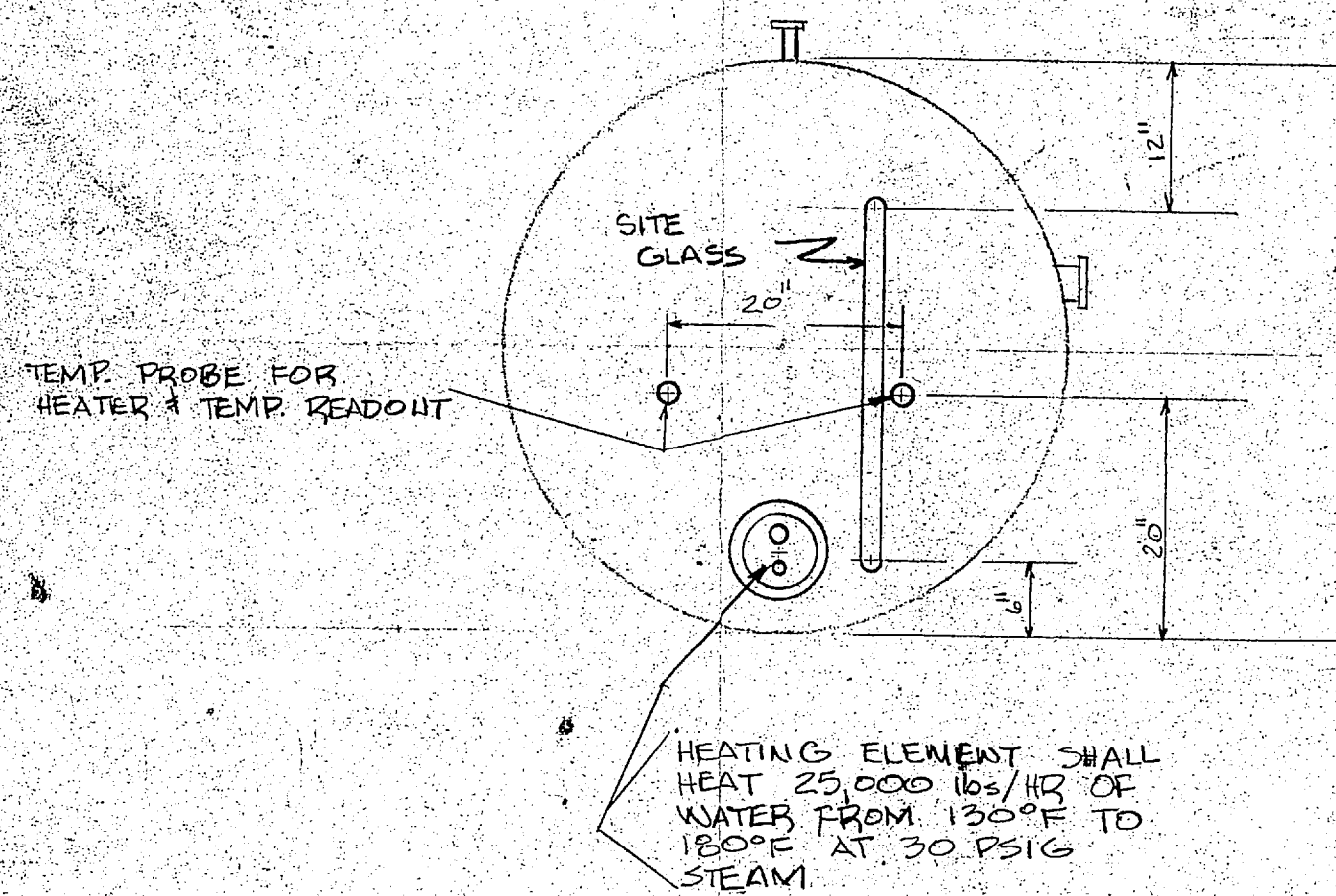
"CECO BUILDING PRODUCTS"
BLDG. HEATING PLANT
FOR MARINE CORPS BASE
LOCATION CAMP LE JEUNE, N.C.
ARCHT'S A. ODELL, JR. & ASSOC.
CONTR'S ALLEN M. CAMPBELL
CECO STEEL PRODUCTS CORPORATION
P.O. Box 1248
BIRMINGHAM, ALA. 35202
DR. BY JOE D. APPROVED: [Signature]
DATE: 10-17-68 K.C.D. SHEET: R4 OF 24
NOTE: WORK THIS SH. WITH SH. # R3

REVISIONS

DATE	DESCRIPTION	BY
10-17-68	10-PRINTS FOR APP	



800-672-0435
Gurney Allen



PROPOSED HOT WATER TANK
NOT TO SCALE

NOTES:

- 1) TANK SHALL HAVE A CEMENT LINING FROM 5/8" TO 3/4" THICK APPLIED TO HEAVY GAUGE METAL ANCHORS WELDED TO INSIDE OF TANK.
- 2) COLLAR FOR HEATING COIL SHALL BE OVERSIZED AND BE FULLY CEMENT LINED.
- 3) DESIGN WORKING PRESSURE - 100 PSI
- 4) SHELL THICK. MIN. - .1875"
- 5) DESIGN TEMP - 300°F
- 6) HEAD THICK. MIN. - .3125"

- ① Measure inside of Cement Saddle 9' 8 1/2"
- ② float from end 11 3/4"
- ③ Center of 2 1/2" drain to center of 2" overflow 6' 8 1/2"
- ④ Center of 3" pump suction to end of tank - 2' 4 1/4"

<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p>
<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p>

DAY STORAGE								
LOCATION	PROJECT	NUMBER OF TANKS & SIZE IN GALLONS						
		AVIATION GASOLINE	REGULAR GASOLINE	MOTOR FUEL V	KEROSENE	DIESEL OIL	#3 OIL	#6 OIL
T.C.1 MESS HALL	1-5						2-1000	
T.C.1 BOILER HOUSE	1-10							1-1300
T.C.1 WASH ROOMS	1-15				8-110			
T.C.1 "	1-16				4-110			
T.C.1 CHAPEL	8						1-560	
GUEST HOUSE	104-2						1-560	
OFFICERS QUARTERS	105-1						133-560	
LAUNDRY	107-3							1-5000
WATER TREATMENT PLANT	108-4						1-560	
CENTRAL HEATING PLANT	108-7							1-8000
IND AREA MAIN SERV. ST	108-11	1-1000	2-1000		1-1000	1-1000		
" " PK	108-11			1-1000				
INCINERATOR	108-12						1-8000	
LANDING FIELD OPER BLDG	115						1-560	
" "	116	4-25000						
RADIO TRANS. BLDG	120						1-1000	
PARACHUTE TOWER	123				1-215			
GATE HOUSE	201-4						1-560	
HEATING PLANT	202-4							1-5000
BA. TRAINING SCHOOL	202-5							
AMPH BASE CAMP SHOP	202-6						1-560	
" MACH	202-6							
" GAS & OIL	202-7	1-10000	1-5000			1-10000		
D.D. MESS HALL	202-9						1-2000	
B.B. HEATING PLANT	202-16							2-10000
RIFLE RANGE MESS HALL	203-2						1-2000	
" HTG PLANT	203-13							2-10000
" GASOLINE	203-18		1-10,000					
" TOILETS & RANGE HOUSES	203-20				8-215			
OFFICERS QUARTERS	205-1						60-560	
BAKERY	208						1-2000	
B.O. MESS HALL	215							2-8000
DIVISION GARAGE	221-5		4-560					
POST	228		4-560					
COAST GUARD TRAINING FACILITIES	249-5		1-2000		1-215	1-2000		
T.C.2 MESS HALL	250-1-5						2-1000	
T.C.2 "	250-1-6						1-1000	
T.C.2 BOILER HOUSE	250-1-11							1-5000
T.C.2 WASH ROOMS	250-1-15				34-110			
T.C.2 "	250-1-16				6-110			
T.C. HOSTESS HOUSE	250-1-20						1-560	
TANK BATTALION	250-3-7				1-215			
" "	250-3-8				4-215			
" "	250-3-9				1-215			
T.C. "	250-3-50		1-2000			1-2000		
PETERFIELD POINT	250-4-1				3-215			
" "	250-4-8				1-215			
" "	250-4-9				1-215			
" "	250-4-50		1-2000			1-2000		
NAVAL HOSP GARAGE	400-1-9		1-10,000					
OFFICERS QUARTERS	400-1-14						3-560	
NAVAL HOSP HTG PLANT	400-1-18							2-15000
" SERVANTS QTR	403						4-560	
MUMFORD PT. BRIG	500-6						1-560	
" CHAPEL	500-12						1-560	
" WASH RMS	500-14				7-215			
" MESS	500-4						1-500	
T.C.2 OFFICERS MESS	250-1-6						1-500	
TOTAL GALLONS		111,000	38,480	1,000	14,420	17,000	33,040	109,300

BULK STORAGE								
LOCATION	PROJECT	NUMBER OF TANKS & SIZE IN GALLONS						
		AVIATION GASOLINE	REGULAR GASOLINE	MOTOR FUEL V	KEROSENE	DIESEL OIL	#3 OIL	#6 OIL
TENT CAMP	1-12		1-15,000					2-15,000
INDUSTRIAL AREA	108-11	2-12,000	6-15,000	2-15,000	1-12,000	1-12,000	2-12,000	1-420,000
TENT CAMP	250-1-13		1-15,000		1-15,000			
TOTAL GALLONS		24,000	120,000	30,000	27,000	12,000	24,000	450,000

1) WAS 6-12,000 TANKS 15 3-15,000 TANKS
2) WAS 3-12,000 " 2-15,000 "

TANK DATA													
FABRICATOR	GARY STEEL PRODUCTS	GARY STEEL	RICHMOND ENGINEERING	GARY STEEL	RICHMOND ENG	RICHMOND ENG	RICHMOND ENG	GENERAL STEEL TANK	RICH	RICH	RICH	RICH	GENERAL STEEL TANK
SIZE GALLONS	560	1000	2000	3,000	5,000	8,000	10,000	12,000	15,000	15,000	15,000	25,000	25,000
DIMENSIONS	42" x 7'6"	48" x 10'11"	5' x 12'6"	5' x 17'1/2"	5' x 15'6"	6' x 21'6"	6' x 26'9"	8' x 32'	8' x 40'	10' x 26'6"	10' x 26'2"	10'6" x 33'2"	10'6" x 40'
PLATE SHELL HEAD	3/16" 1/4"	3/16" 1/4"	3/16" 1/4"	3/16" 1/4"	1/2" 1/4"	1/2" 1/4"	1/2" 1/4"	3/16" 3/16"	3/16" 3/16"	3/16" 3/16"	3/16" 3/16"	3/16" 3/16"	3/16" 3/16"
QUANTITY	221	14	8	1	2	4	8	6	2	2	3	1	1

TANK OPENINGS				
FOR LOCATION OF TAPPED OPENINGS REFER TO INSTALLATION DRAWINGS				
NO. OF TANKS	CAPACITY	DIA.	LENGTH	TAPPED OPENINGS
4	25,000	10'6"	43'0"	SEE M.B. DWG No 1671
1	15,000	8'0"	40'0"	1-1' 2-2' 1-3' 1-3/2' 1-6"
8	15,000	8'0"	40'0"	2-2' 4-3' 1-6"
2	15,000	10'0"	26'6"	2-2' 4-3' 2-3/2"
3	15,000	10'0"	26'6"	1-1' 2-2' 1-3' 1-3/2' 1-6"
6	12,000	8'0"	32'0"	2-2' 4-3' 1-6"
8	10,000	8'0"	32'0"	3-2' 2-3' 2-4"
4	8,000	8'0"	31'6"	2-2' 1-3' 2-3/2' 1-4"
2	5,000	8'0"	13'6"	2-2' 2-3' 2-3/2' 1-4"
1	3,000	5'0"	18'0"	1-1' 4-2' 1-3"
2	2,000	5'0"	12'8"	1-1/4' 1-3' 2-3/2"
14	1,000	4'0"	0'11"	1-1/4' 1-3' 2-3/2"
221	560	3'6"	7'8"	2-1' 1-2"

1) WAS 15 TANKS 15 G TANKS
2) WAS 1 " " " "

1 THIS 5000 GAL TANK IS TO BE INSTALLED TEMPORARILY AT THE LAUNDRY UNTIL THE CENTRAL HEATING PLANT IS COMPLETED & THEN INSTALLED AT THE BALLOON BARRAGE TRAINING SCHOOL.
2 TANK TO BE OMITTED AT THIS TIME SEE M.B. DWG No 4627 REV. D 5/11/42
3 TWO TANKS FOR HIGH OCTANE GASOLINE & TWO TANKS FOR LOW OCTANE GASOLINE. THE 2 5000 TANKS ARE PLANT 4

DRAWN BY J.K.	CARR & J. E. GREINER CO.—ARCHITECT-ENGINEERS
CHECKED BY S.W.	DURHAM, N. C. BALTIMORE, MD.
CHECKED BY	MARINE BARRACKS—NEW RIVER, N. C.
CHIEF DPMN	BUREAU OF YARDS AND DOCKS—U. S. NAVY
IN CHARGE	
DATE 9-21-42	
SCALE NONE	
Y. & D. DRAWING NO.	
228829	
ARCHITECT-ENGINEERS SPECIFICATION	
APPROVED [Signature]	RESIDENT OFFICER IN CHARGE
NO. 603 & 117	
REVISION	DATE
BRIEF	R.O. IN CHARGE
BY	
SEE SCHEDULE ABOVE	SHEET
U.S. PROJ. NO.	OF
U.S. DWG. NO.	5642

DEC 8 1947

10/15/48

Kennedy

Kennedy

8/10/48
9/10/48
10/10/48

10/10/48
11/10/48
12/10/48

Inventory Data-

Location	TANK#	Ft. Ins.	Gals.	Total Tank Cap.	Due IN
M-625	1			20,000	
	2			30,000	
Total				50,000	
G-650	1			60,000	
	2			60,000	Ordered Date
Total				120,000	
BOQ-2615	1			8,000	
	2			8,000	
Total				16,000	
BB-9	1			10,000	
	2			10,000	Plants Rec.
	3			10,000	CHP-1700
Total				30,000	G-650
RR-15	1			10,000	Mcas-422
	2			10,000	M-625
Total				20,000	BB-9
Mcas-422	1			25,000	RR-15
	2			25,000	BOQ-2615
	3			25,000	
Total				75,000	
CHP-1700	1			420,000	
	2			170,000	3 Tanker at
Total				536,000	4151 Mcas 105,000 gal ready
Total #6 Oil on Hand					
Total #6 Oil Rec					

1000

17 November 1959

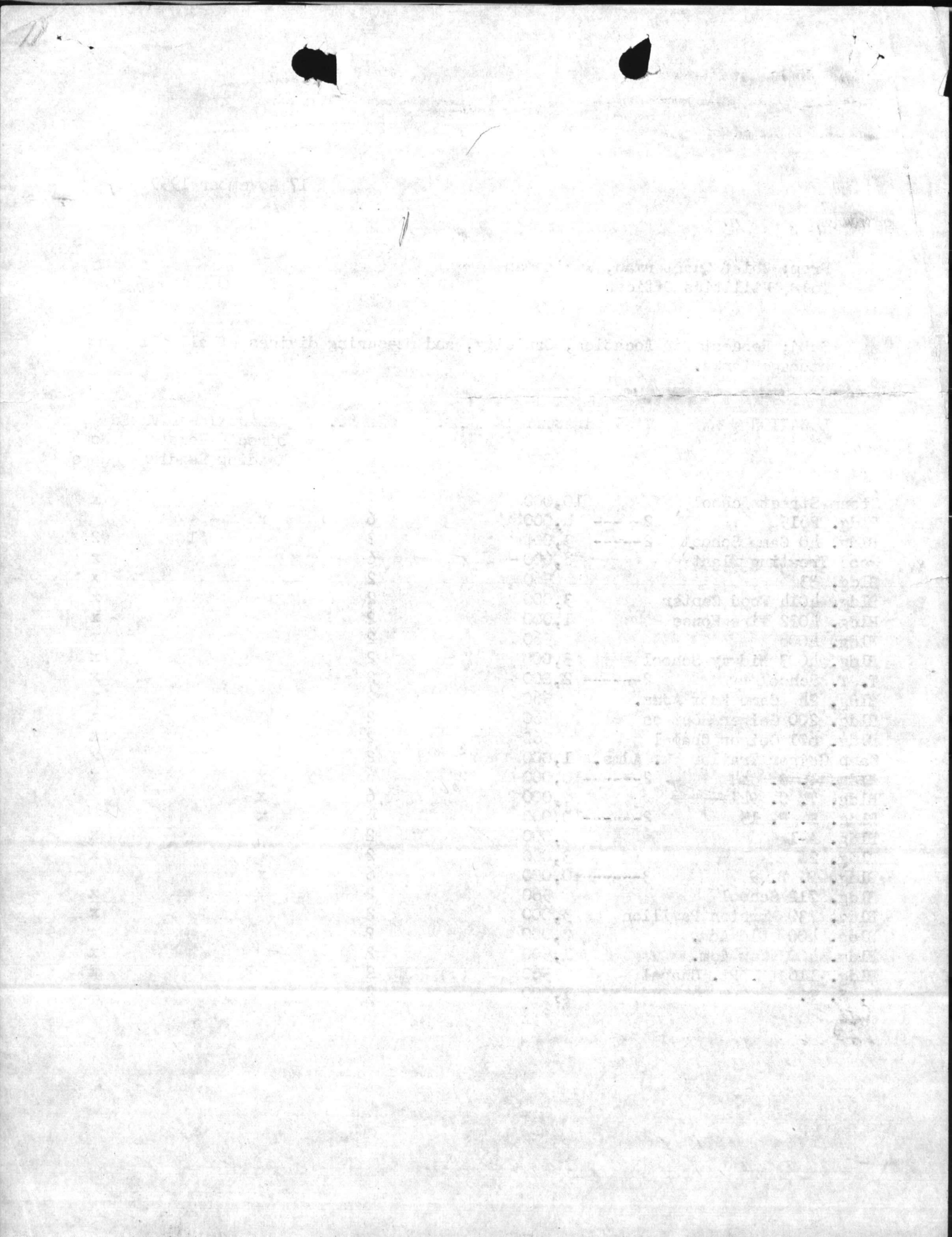
From: Chief Quarterman, Engineman
 To: Utilities Officer

Subj; Request for Location, Capacity, and measuring devices of all oil storage tanks.

LOCATION	TANK CAPACITY IN GALS.	OIL NO.	MEASURING DIVICES		
			Direct Reading	Remote Reading	No Gage
D 149 1700	8,000	6			
FTC 202	10,000	2			
Stone Street School	10,000	2			X
Bldg. 2615	2----- 8,000	6	X		
Bldg. 40 Camp School	2----- 3,000	2		#1	#2
Wood Treating Plant	8,000	6			X
Bldg. 33	560	2			X
Bldg. 4014 Food Center	3,000	2			X
Bldg. 4022 Fire House	1,000	2			X
Bldg. 4008	560	2			X
Bldg. 4003 Midway School	3,000	2			X
T. T. School	2----- 2,000	2			X
Bldg. 24 Camp Knox Adms.	560	2			X
Bldg. 200 Geiger Hostess	560	2			X
Bldg. 601 Geiger Chapel	560	2			X
Camp Geiger Trailer Pk. Adms.	1,000	2			X
Bldg. 3, 6, 9, 11	2----- 10,000	6	X		X
Bldg. T. C. 941	8,000	6	X		
Bldg. R. R. 15	2----- 10,000	6	X		
Bldg. A-1	3,000	2			X
Bldg. 26	3,000	2			X
Bldg. B. B. 9	3----- 10,000	6	X		
Bldg. 712 School	560	2			X
Bldg. 730 Marston Pavilion	3,000	2			X
Bldg. 4000 Old Adms	2,000	2			X
Bldg. 4002 New Adm. M.P. Nursery	1,500	2			X
Bldg. 116 M. Pt. Chapel	560	2			X
U. S. O.	1,000	2			X
Bldg. 3	3,000				
BA 106	8,000				
M-230	15,000	2			
Tank No. S-1701	420,000	6			
(for 1700)	168,000 new tank				

f.o. Pump House No. 1706

Tanks of 4151 MCAS 10,500 each 3 Cap 315,000 gal



How many days at peak load - will oil last at
 all the plants, leaving 2 m gal. in ea. tank, (information
 for Mr. Herndon - ex.)

x
 1. T.C. 650, $2 \cdot 60^m = 120$ m gal. - 10 m left in tanks 110 m. 115 (st. p. gal. oil)
 $\sqrt{110,000 \cdot 115 = 12,650,000}$ lbs. steam.

x
 2. RR-15, $2 \cdot 10^m = 20$ m gal. - 4 m left in tanks = 16 m. 110 (st. p. gal. oil)
 $16,000 \cdot 110 = 1,760,000$ lb. steam

x
 3. BB-9, $3 \cdot 10^m = 30$ m gal. - 6 m left in tanks = 24 m. 110 (st. p. gal. oil)
 $\sqrt{24,000 \cdot 110 = 2,640,000}$ lb. steam

x
 4. BCQ 2615, $2 \cdot 8^m = 16$ m gal. - 4 m left in tanks = 12 m. 110 (st. p. gal. oil)
 $12,000 \cdot 110 = 1,320,000$ lb. steam

x
 5. M-625, $1 - 20^m$ tank
 $1 - 30^m$, 50^m gal. - 6 m left in tanks, = 44 m. 110 (st. p. gal. oil)
 $\sqrt{44,000 \cdot 110 = 4,840,000}$ lb. steam

x
 6. M-230, $2 \cdot 15^m = 30$ m gal. - 4 m gal. left in tank = 26 m. 110
 $26,000 \cdot 110 = 2,860,000$ lb. steam.

x
 7. BA-106, $1 - 10^m$ gal. tank
 10 m gal. - 2 m gal. left in tank = 8 m. $110 =$
 $8,000 \cdot 110 = 880,000$ lb. steam
 (turn over)

1304

PA-106

1-10m gal. tank

FC. 202 10m - 2m gal. left in tank = 8m · 110 (Std. gal. oil.)

$$8000 \cdot 110 = 88,000$$

Mr. Lanier

Jyped 8/29/14
PS

Please get a W/R to pump ^{water} out the following oil tanks

Pl. 3

- Stone St. School Bldg. 1944
- ~~Steam plant~~ (2) " P.P. 2615
- Lejeune H.S. Bldg. 825
- Gate House " 33
- M.P. Fire Barn " 4022
- M.P. Community " 4025
- M.P. School " 4003
- Heavy Equip " 48
- T. T. School " TT - 48
- T. T. Housing Office " TT - 43
- T. T. Community " TT - 2457
- T. T. Comm. " TT - 2455
- Knox Adm. Bldg. " D 24
- M. Point Steam plant " M 625
- " " " " " M 230
- Chapel " TC 601
- Staff Club " TC 200
- Adm. Bldg. " TC 1
- " " " " " BB 48
- " " " " " BB 49
- Steam plant (3) " BB 9
- Steam plant " BA 106



12/20/20

1. ...
2. ...
3. ...

4. ...
5. ...
6. ...

7. ...
8. ...
9. ...

10. ...
11. ...
12. ...

13. ...
14. ...
15. ...

16. ...
17. ...
18. ...

	Bldg SH 8	
	Bldg 738	
Delatio School	"	7C1500
	"	U.S.O
Steam plant	"	F.C 202
T.T. Community Center	"	2457
Stone Bay	"	211
"	"	212
"	"	213
"	"	215
"	"	216
"	"	217
Brewster st. School	"	40
Golf Course	"	1915
Berkley Manor school	"	5400
T.T School	"	60
E.C.G. Sewage Plant	"	85 67
MCHS		820
		843
	CRH.	2800
		3502
		3504
		105

8 42 11

7 13 11

7 12 11

7 11 11

7 10 11

7 9 11

7 8 11

7 7 11

7 6 11

7 5 11

7 4 11

7 3 11

7 2 11

7 1 11

7 0 11

7 0 11

7 0 11

7 0 11

7 0 11

7 0 11

7 0 11

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7 0 11

SHIPPING LIST FOR ONE TANK

MARK	REQ'D	DESCRIPTION	SIZE	WT.
	1	30000 GALLON TANK	126" ϕ x 46'-4 1/2" LG	
	4	HOLD-DOWN STRAPS		
	1	2" STD. STL. PIPE (T.O.E.) (METERING PIPE) X	"LG.	
	1	2" ---"--- ---"--- (SENSING PIPE) X	"LG-	
	1	SUCTION BELL HEATER		
	1	2 1/2" STD. WT. PIPE (T.B.E) W/UNION X	"LG. (SUCTION)	
	1	2" ---"--- ---"--- ---"--- X	"LG. (RETURN)	
	2	3/4" ---"--- ---"--- ---"--- X	"LG (STEAM IN + OUT)	

REVIEWED
FENNER & PROFFITT
 Consulting Engineers
 WILSON, NORTH CAROLINA

TANK DWG. X 4264 R-1

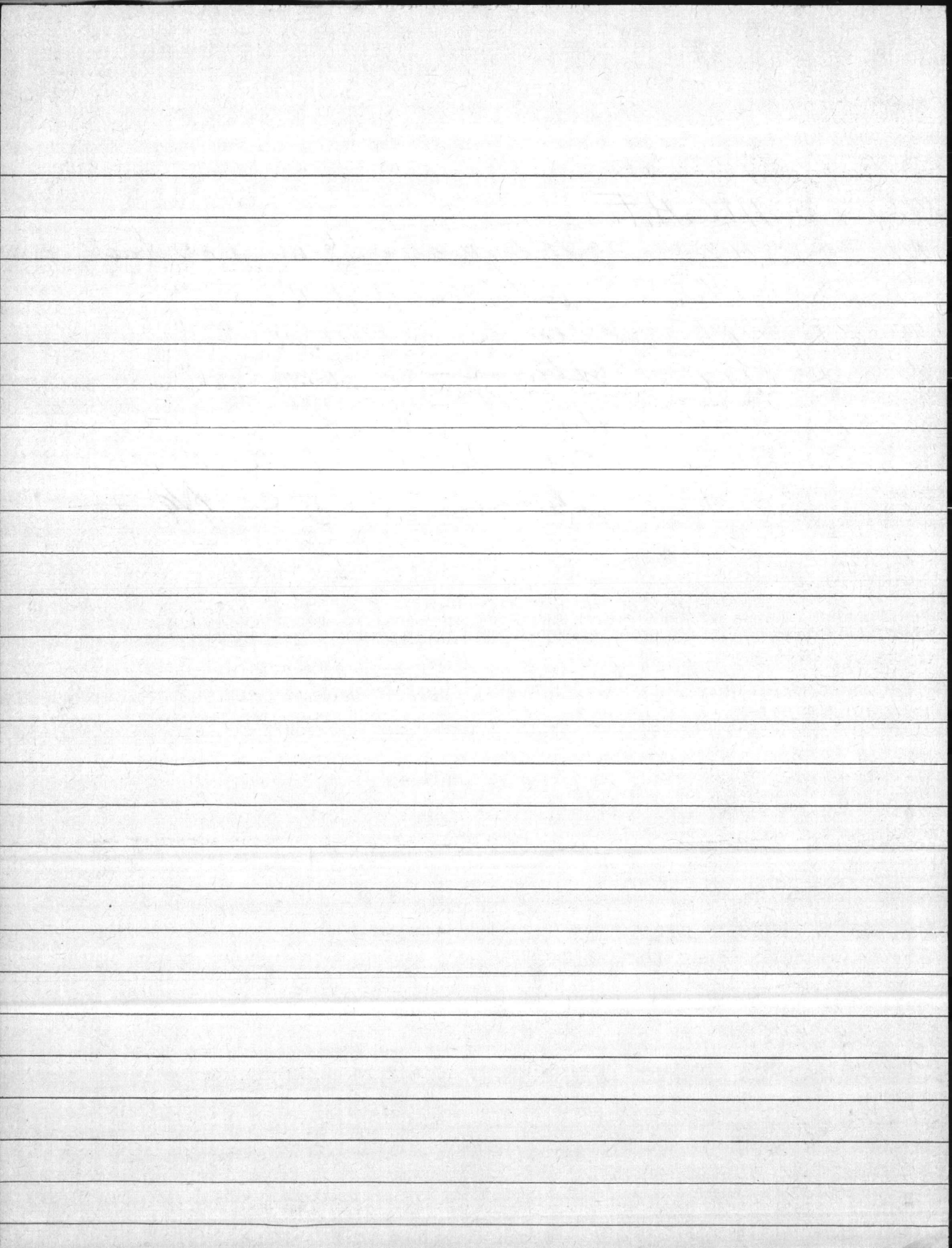
NO.	REVISION	BY	DATE	BUFFALO TANK DIVISION BETHLEHEM STEEL COMPANY		DRAWING
				BOILER BRICK & REFRACTORY Co., INC.		
				DATE 7/22/65	CUST. ORDER 1387	
				DRAWN 2	CONTRACT X 4264 R	SKX 4264 11
				CHECKED		

29334 (10-60)

Faint, illegible text, possibly a stamp or watermark, located in the lower central area of the page.

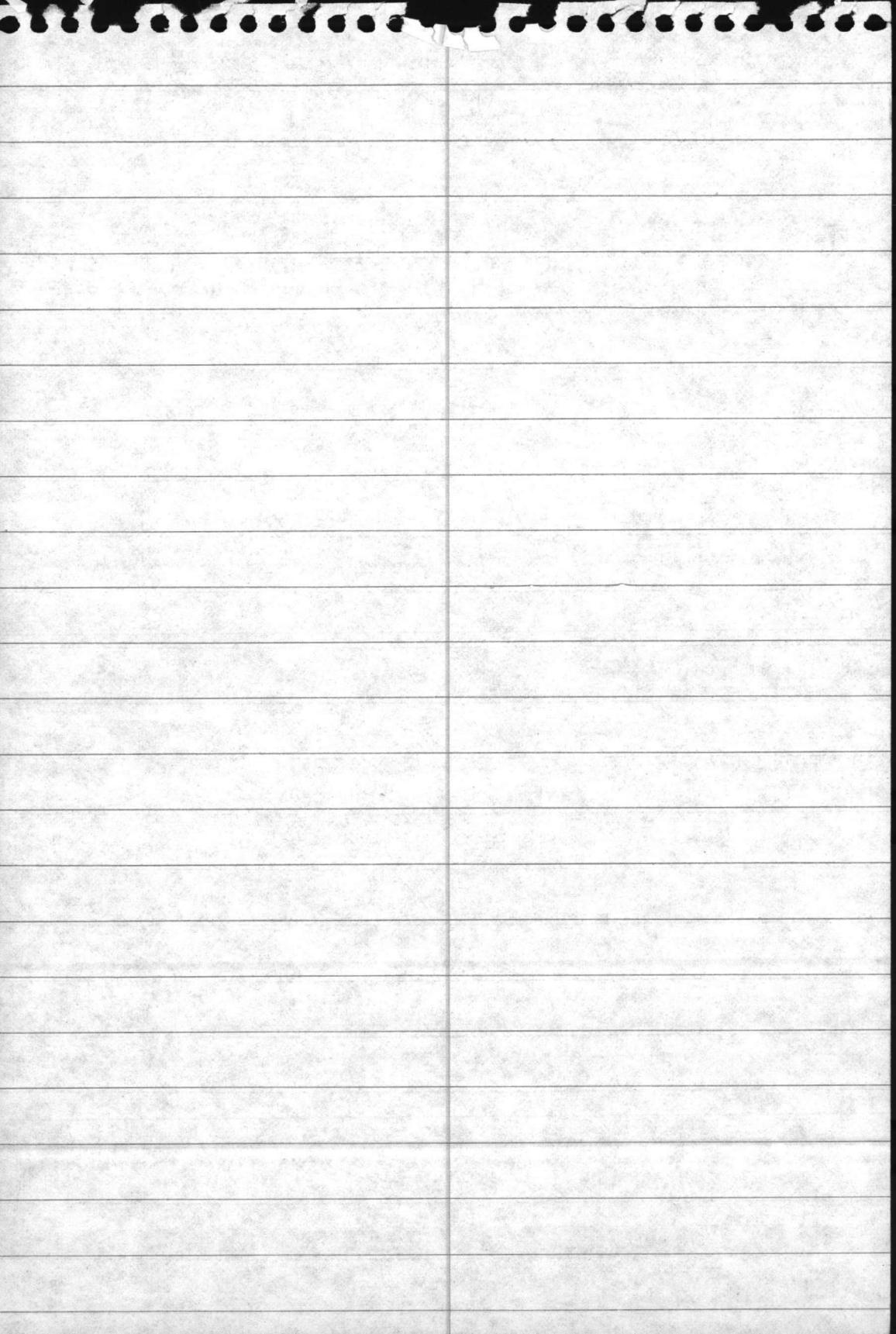
Small Plants

Pldg.	M.C.A.F.	Hot	tank size	Fuel
No. X	702	Hot water	6 m	No 2 fuel
" X	704	Hot water	6 m	"
" X	705	steam	10 m	"
" X	710	steam	6 m	"
" X	422	steam (3)	25 m	No 6 fuel
	3502	steam	1 m	No 2
	3504	steam	5 c	No 2

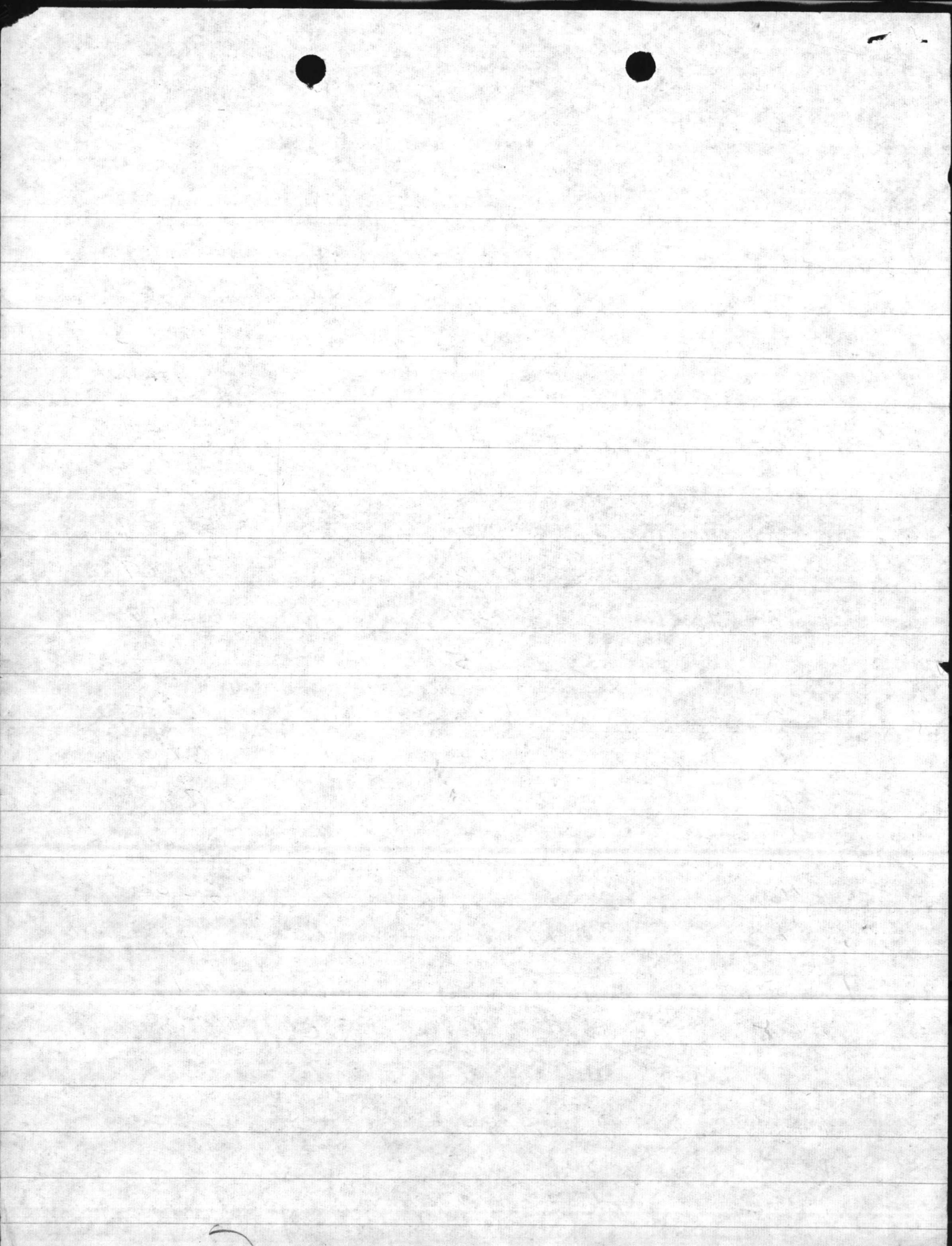


7-22-74

FUEL OIL TANK CAPACITY FOR
BLD. 33 OR MAIN GATE IS 550 GAL.



INCH.	GALL	INCH	GALL	IN.	GALL
1-	21	23	1785	45	4360
2	55	24	1890	46	4480
3	97	25	2000	47	4600
4	146	26	2115	48	4720
5	202	27	2227	49	4840
6	262	28	2340	50	4980
7	326	29	2455	51	5079
8	395	30	2570	52	5197
9	468	31	2687	53	5417
10	546	32	2805	54	5436
11	626	33	2915	55	5554
12	710	34	3038	56	5670
13	796 ⁹	35	3160	57	5785
14	885	36	3280	58	5890
15	976 ⁹	37	3400	59	6000
16	1070	38	3520	60	6105
17	1165	39	3640	61	6215
18	1264	40	3760	62	6325
19	1366	41	3880	63	6435
20	1467	42	4000	64	6542
21	1570	43	4120	65	6648
22	1674	44	4240	66	6745



met

~~6945~~

67 6850

68 6950

69 7045

70 7133

71 7218⁵

72 7300

73 7380

74 7460

75 7535²⁵

76 7610

77 7680

78 7750

79 7815

80 7850

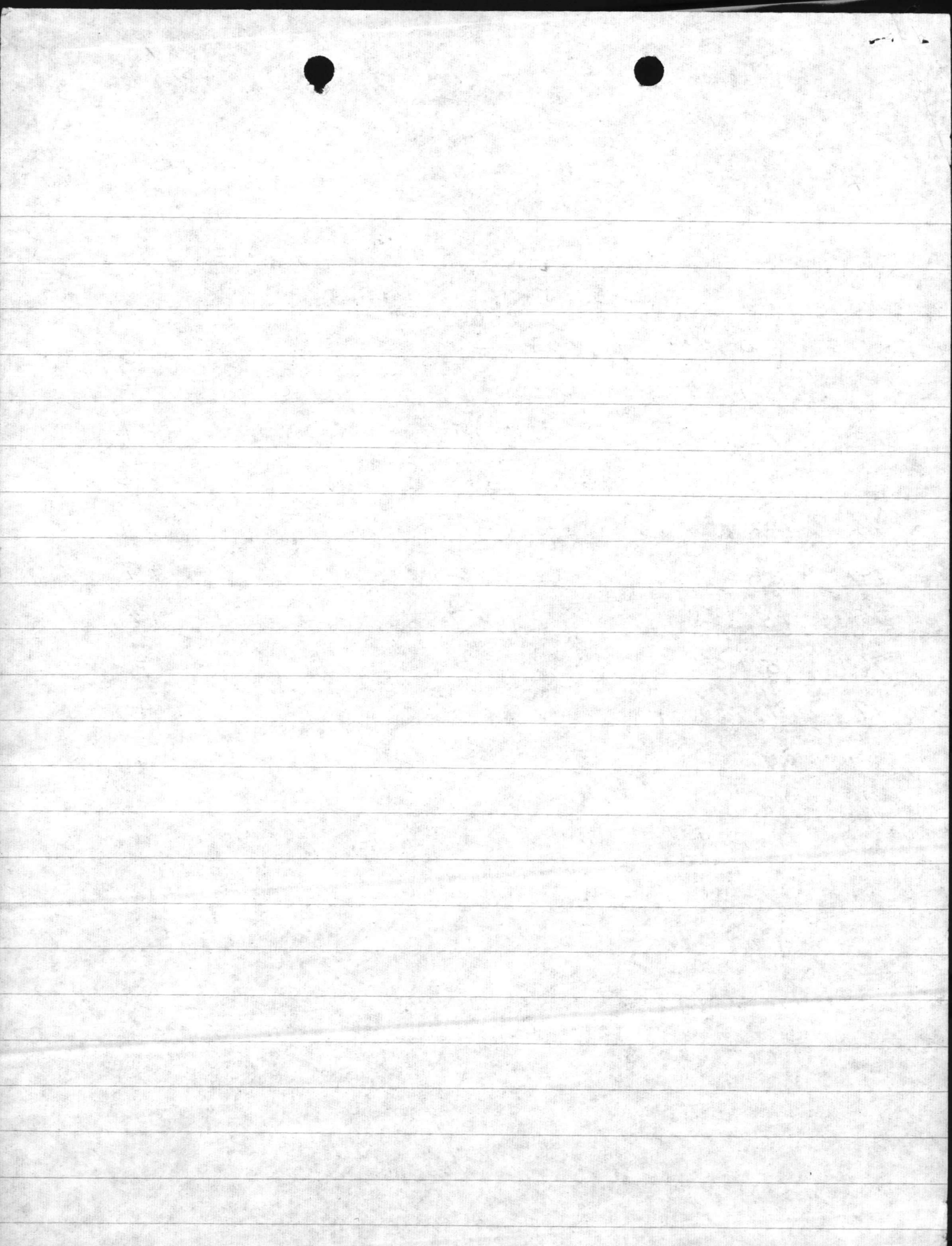
81 7900

82 7945

83 7979

84 — 8000

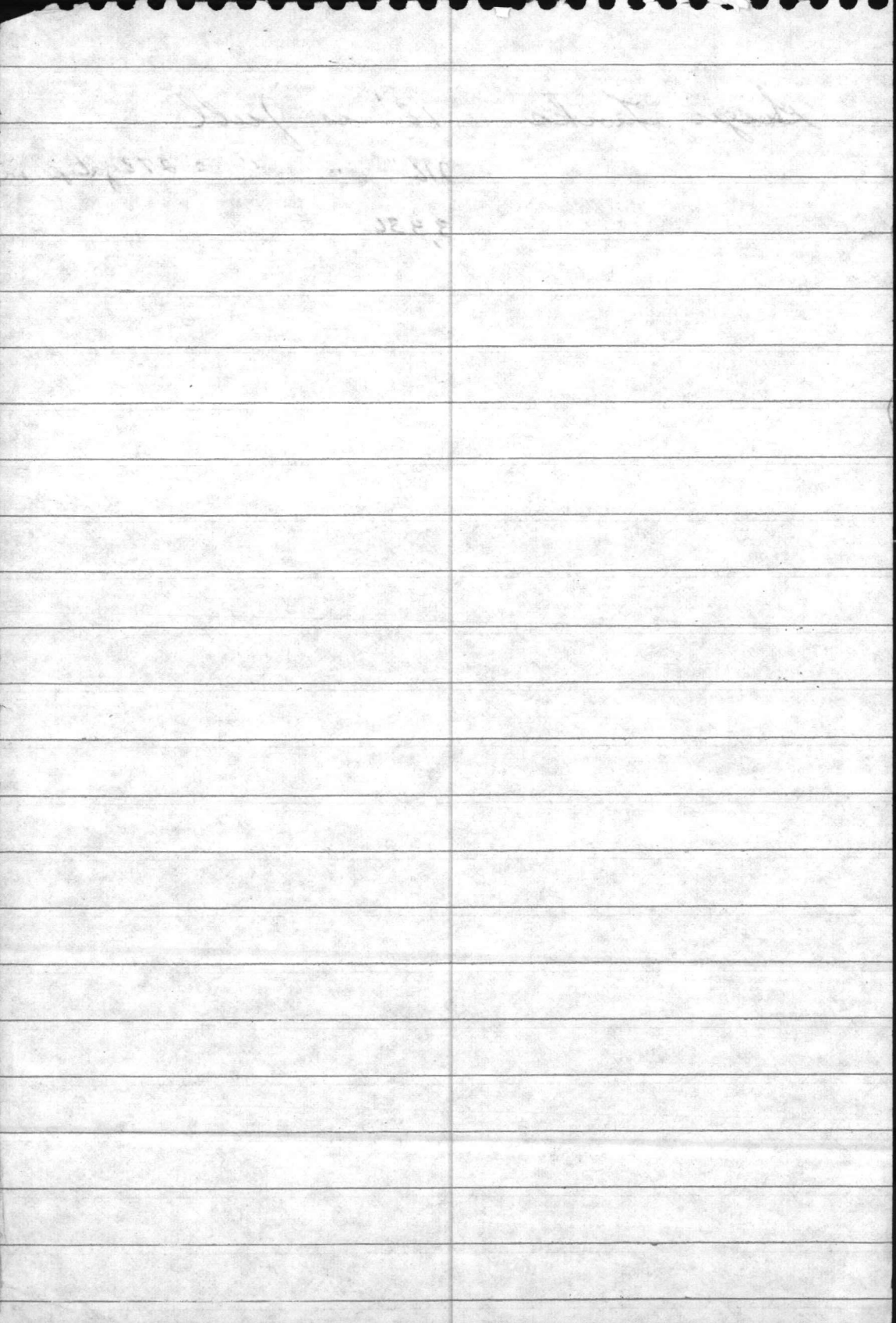
3/84/28
66/24



Sierra Tanks

18' is full
216" " " = 278 gals per in

3,336



W. B. GUIMARIN & COMPANY, Inc.

Mechanical Contractors & Engineers

COLUMBIA, S. C.

HOME MAN'S COPY

Date JUNE 3 19 63

To RECO TANKS, INC.
P.O. BOX 147
WEST COLUMBIA, S.C.

Job No. 648
 Contract No. NBY-50222
 Job Name CAMP LEJEUNE, N.C.

Specification Reference 13-15 FUEL OIL STORAGE TANKS - TANK COIL HOLDDOWN STANDS

GENTLEMEN:

We are { sending to you returning } { Herewith Separately } { Literature Shop Drawings Revised Drawings Blue Prints Diagrams } { For Approval For Manufacturing Release For Construction For Re-submission* For File }

No. of COPIES	SUBMITTAL No.	MANUFACTURER OR SUPPLIER	DRAWING No.	SPEC. No.	DESCRIPTION
1	7	RECO TANK	S1768 S294	13.15	TANK & HOLD DOWN COIL DETAIL

NOTE!
 *Drawings marked "re-submit corrected drawings" do NOT give authority to proceed with any portion of the work shown thereon. Shop drawings marked "approved as noted" give authority to proceed in accordance with notes but corrected blueprints must be submitted in _____ copies.

REMARKS: RUSH - PLEASE ADVISE SHIPPING DATE.

Please return NO copies to this office.

Copies to {

Yours very truly,

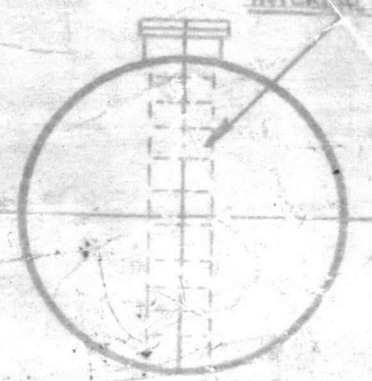
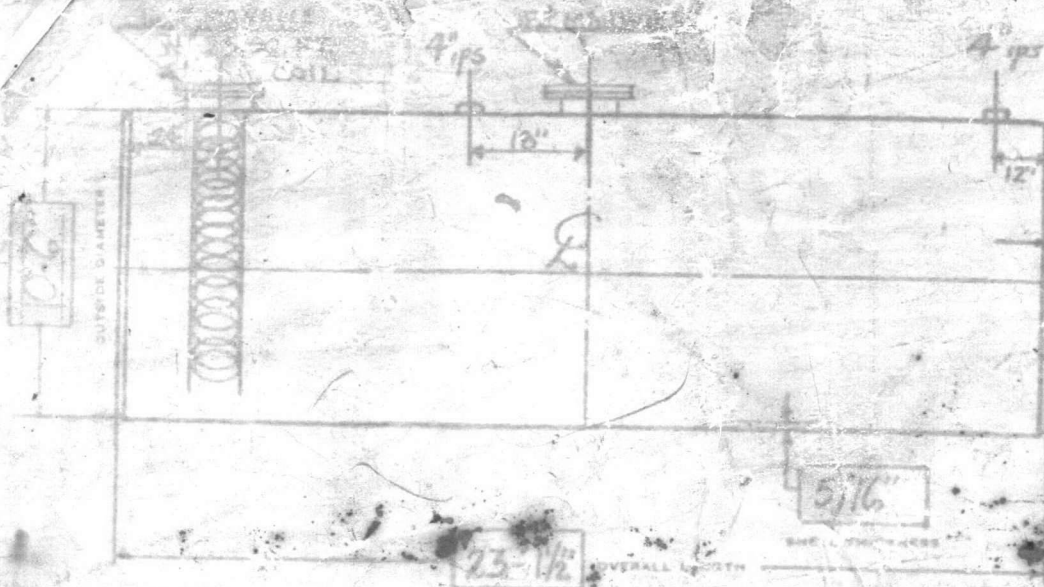
W. B. GUIMARIN & COMPANY, Inc.

By Edwin T. Bowerswell
 EDWIN T. BOWERSWELL

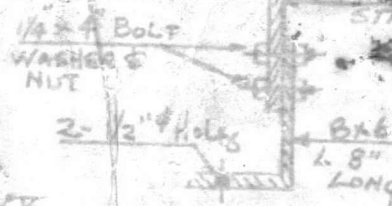
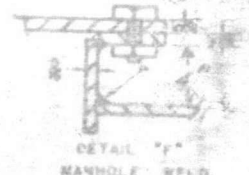
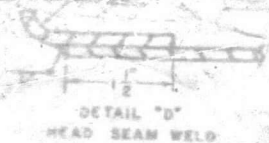


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APPENDIX



STRAP DETAIL

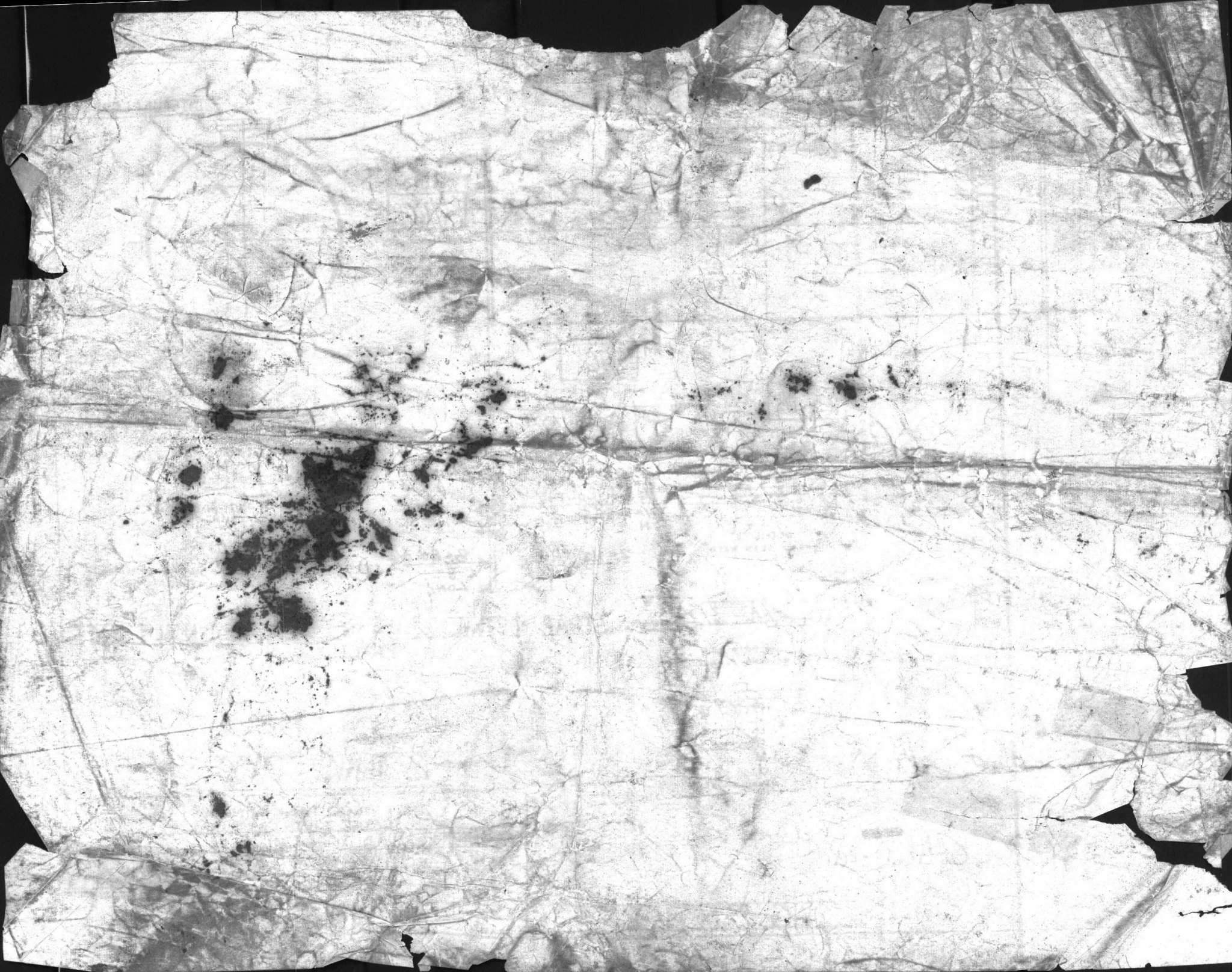
1/2\"/>

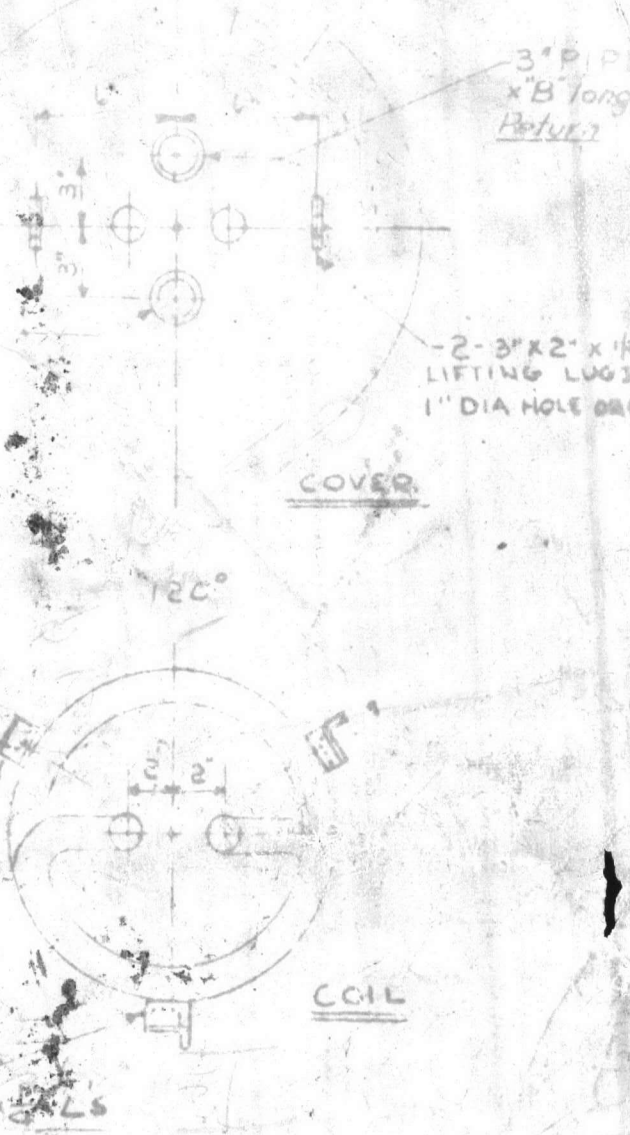
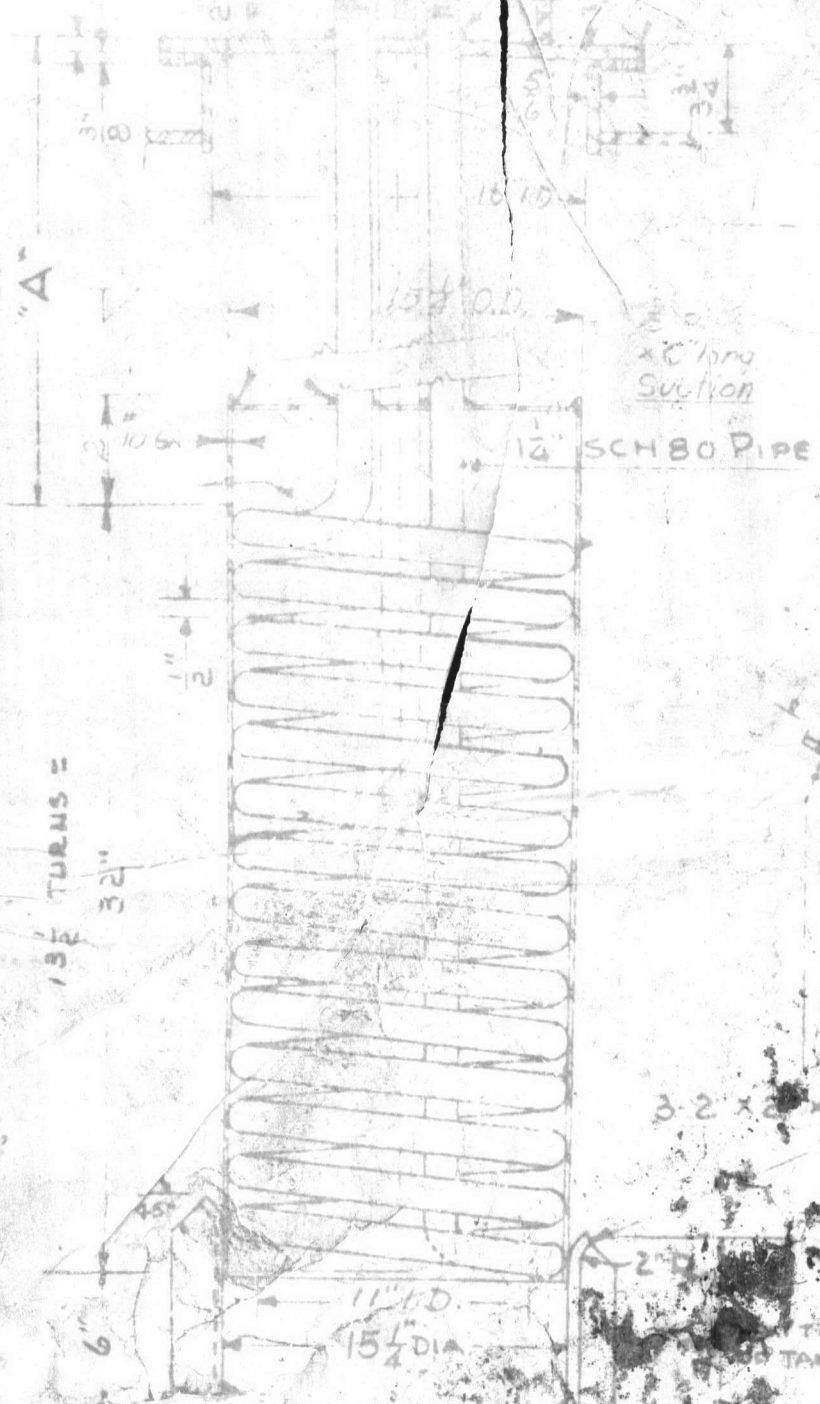
15,000 GAL. CAP.

2 TANKS THUS

RECO TANKS, INC.	
CAYCE, SOUTH CAROLINA	
REC'D UNDERGROUND	UNDEWRITER
FOR W. B. GUTMANN & CO.	
JOB NAME	
DATE	DATE
5-20-63	

DWG. # 63148





Tank Dia	'A' Dim.	'B' Dim.	'C' Dim.
122	252"	96"	6"
102	202"	120"	188"
102	202"	120"	94"
10 1/2	92"	126"	94"

THIS DRAWING IS THE PROPERTY OF RICHMOND ENGINEERING CO., INC. (AND IS NOT TO BE PRINTED, PHOTOGRAPHED, COPIED, LOANED, OR USED WITHOUT ITS PERMISSION.)

RECO TANKS, INC. Cayce, S. C.
RICHMOND VIRGINIA

HEATING COIL FOR STORAGE TANK
 25 SQ. FT. HEATING SURFACE

NO.	DESCRIPTION	BY	DATE
1		D.F.B.	
		J.S.L.	

DATE: 11-27-60

REFERENCE DRAWING SCALE: NONE
 DRAWING NUMBER: A-52-94

1304
126
101

16

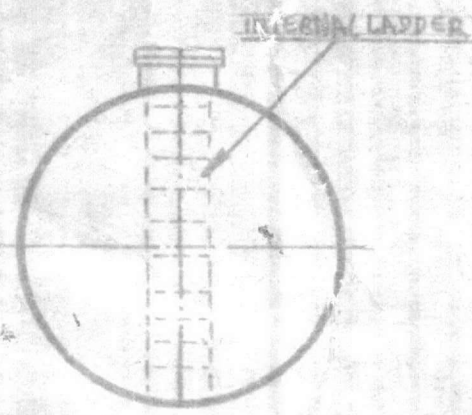
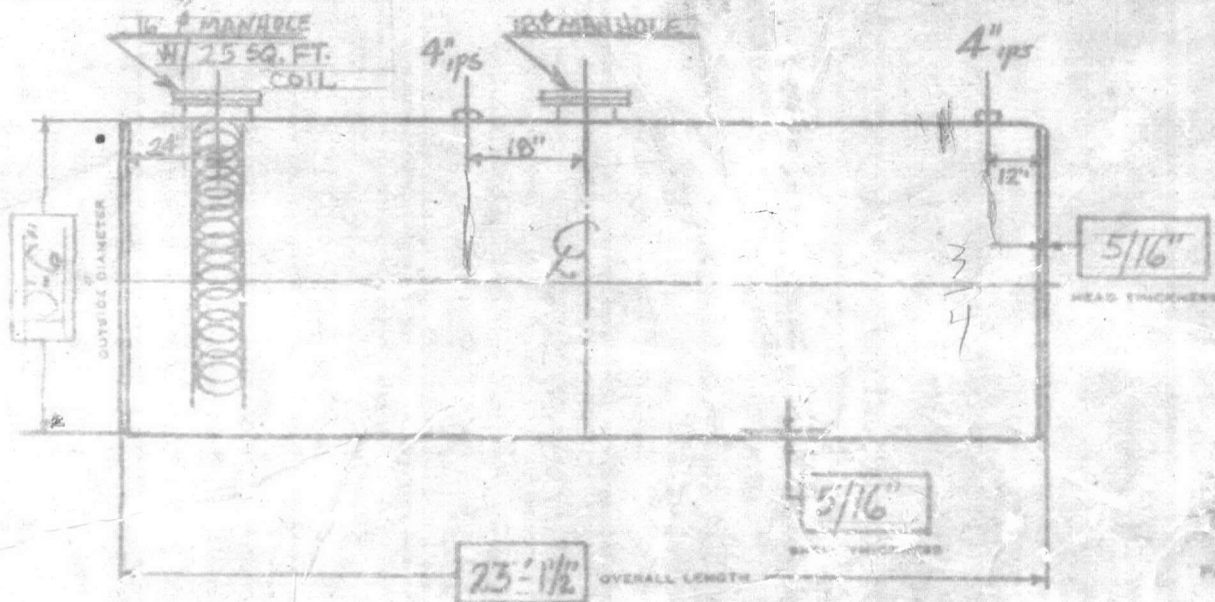
11

RECOGNITION OF THE STATE OF VIRGINIA

THE COMMONWEALTH OF VIRGINIA

OFFICE OF THE COMMISSIONER OF REVENUE

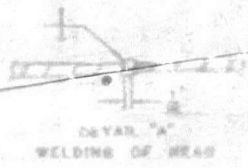
REVENUE DEPARTMENT



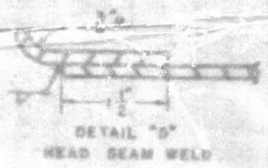
PAINT: ~~OUTSIDE ONLY ONE COAT OF RED LEAD PAINT~~

CUTTER O.I.V. NO COAT OF RED LEAD AND ONE COAT OF BLACK ASPHALTUM.

OUTSIDE ONLY ONE COAT OF BLACK ASPHALTUM.



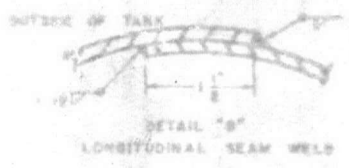
DETAIL "A"
WELDING OF HEAD



DETAIL "D"
HEAD BEAM WELD



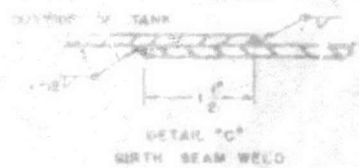
TRAP DETAIL



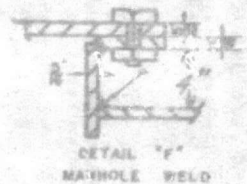
DETAIL "B"
LONGITUDINAL SEAM WELD



DETAIL "E"
WELDING FLANGE WELD



DETAIL "C"
GIRTH BEAM WELD



DETAIL "F"
MANHOLE WELD

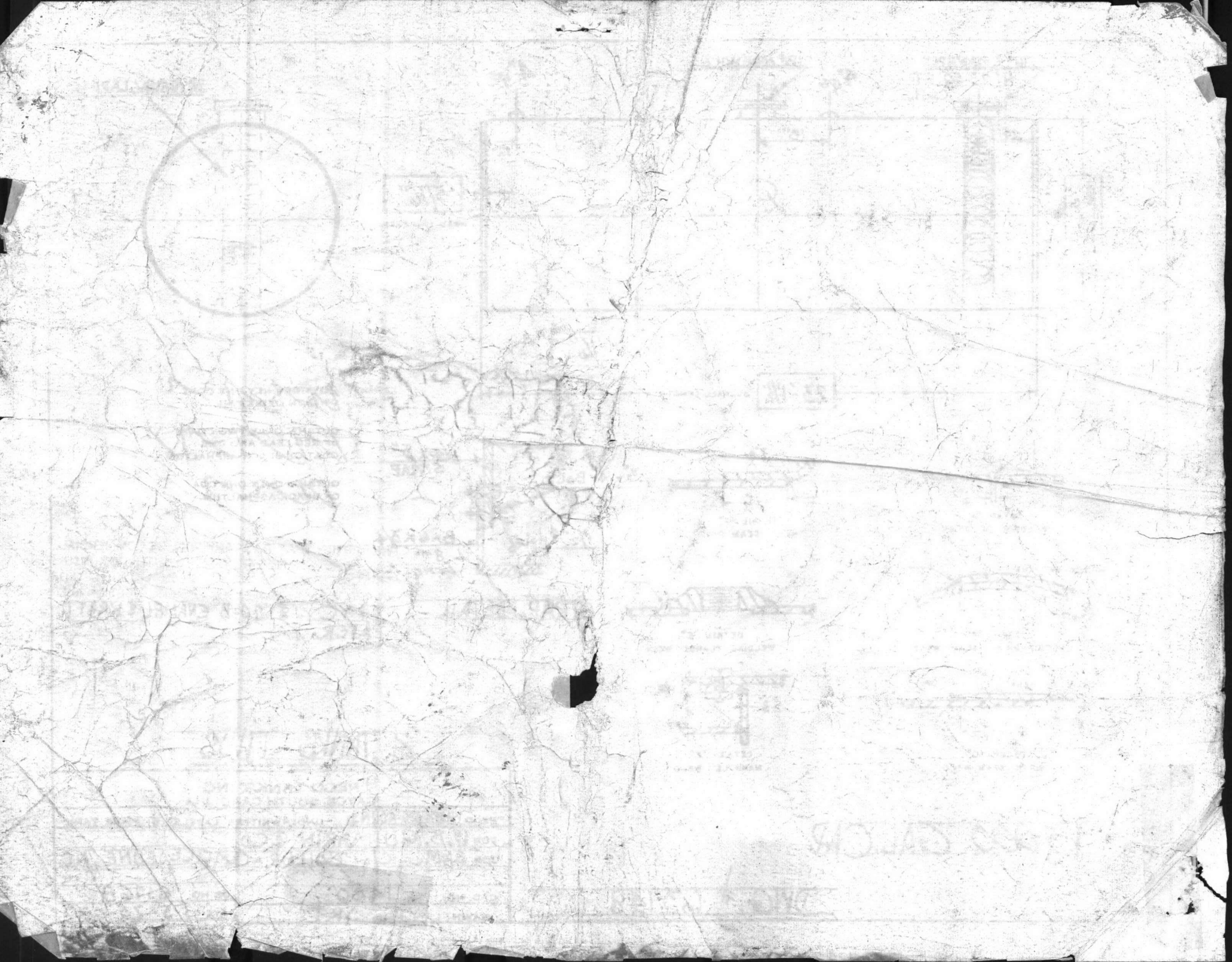
WE CERTIFY THAT THIS TANK WILL BE COMMERCIAL
 SANITIZED, FRIGID, COATED WITH POT. DIU.
 TRIPLE ENAMEL AND BLACK ASPHALTUM
 INSULATED WITH 2\"/>

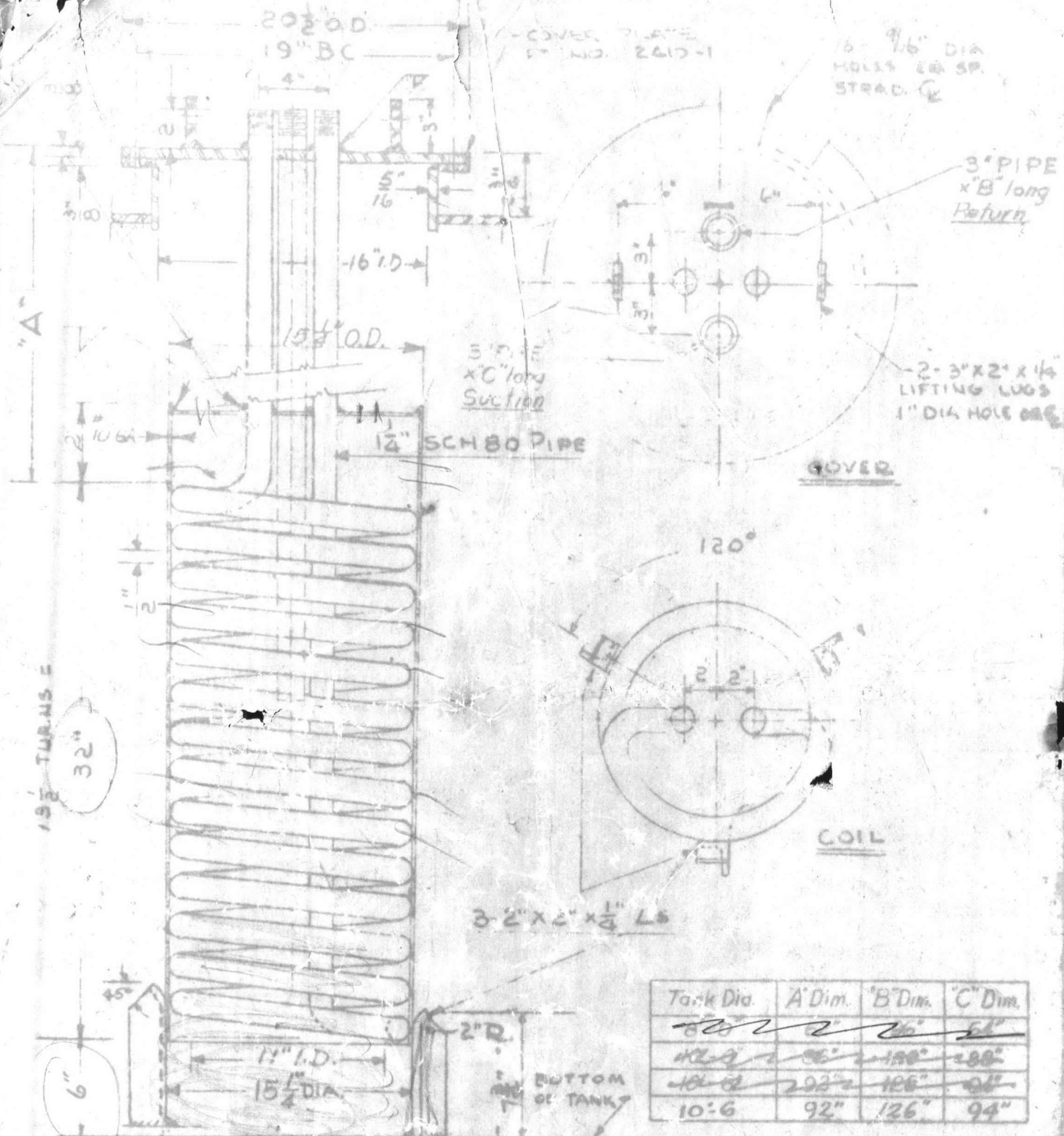
2 TANKS - THUS

15,000 GAL. CAP.

DWG. # 63148

RECC TANKS, INC. CAYCE, SOUTH CAROLINA	
RECC UNDERWRITERS ASS'N. UNDERWRITERS LABEL NO. 51022-VE TANK	
FOR W.B. GUIMARIN & CO.	
JOB SAME - C/O BOILER - CAMP LEESBURG, NC.	
C.O. NO. 1400	JOB NO. 51768
DRAWN JRT	DATE 5-20-63





Tank Dia.	A' Dim.	B' Dim.	C' Dim.
20 1/2	92	126	94
18 1/2	78	108	88
16 1/2	62	86	74
10'-6"	92"	126"	94"

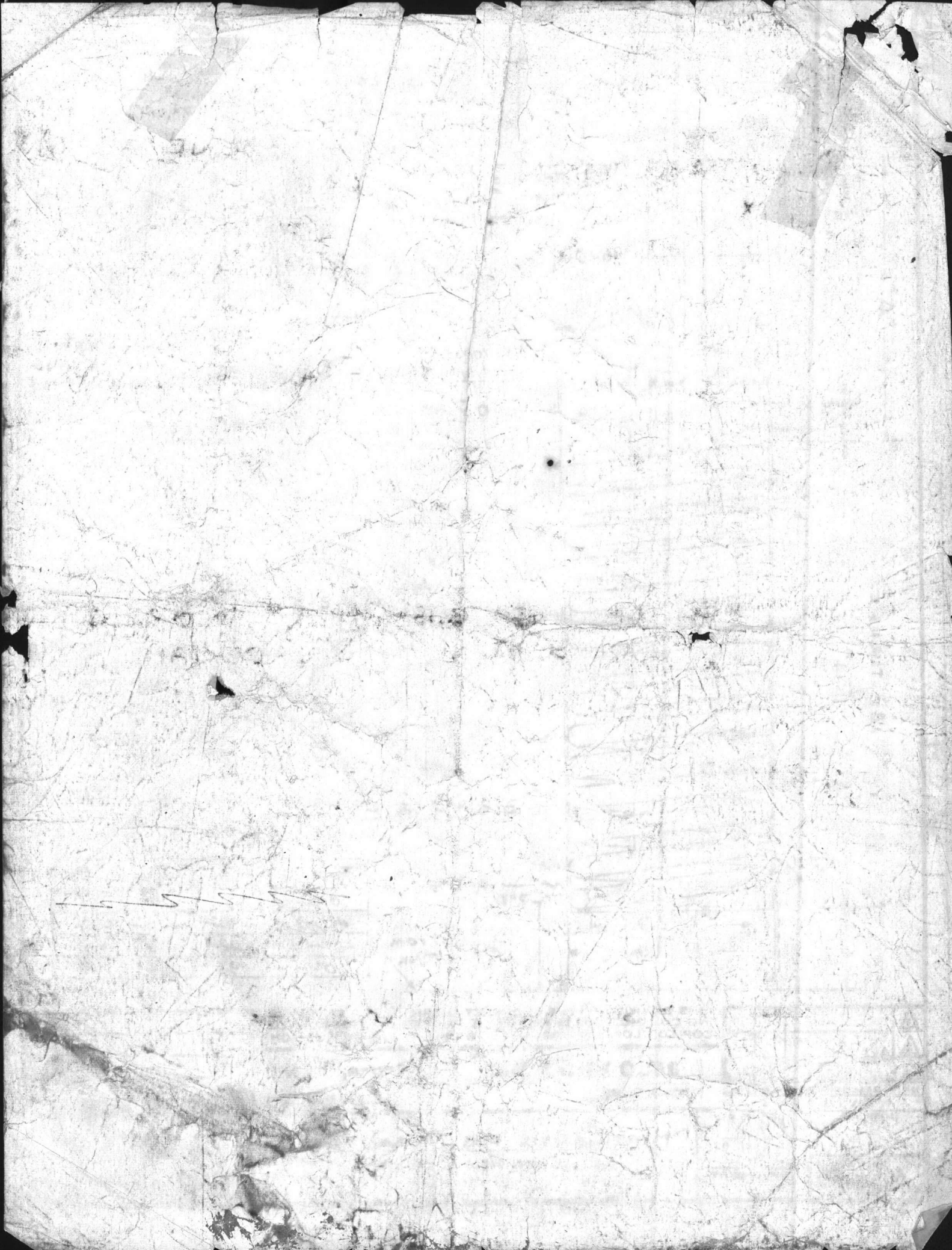
THIS DRAWING IS THE PROPERTY OF RICHMOND ENGINEERING CO., INC., AND IS NOT TO BE PRINTED, PHOTOGRAPHED, COPIED, LOANED, OR USED WITHOUT ITS PERMISSION.

RECO TANKS, INC. Cayce, S. C.
RICHMOND VIRGINIA

HEATING COIL FOR STORAGE TANK
 28 3/4 FT. HEIGHT TANK

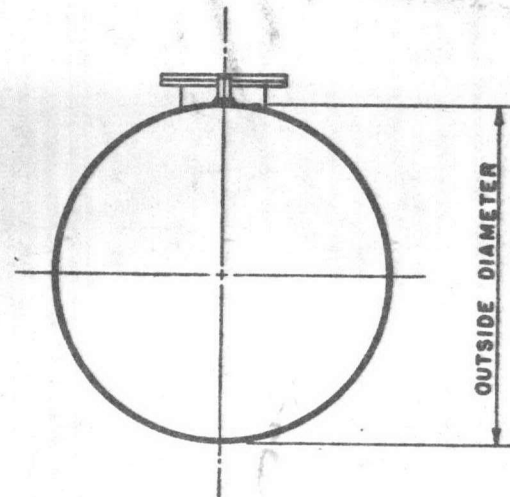
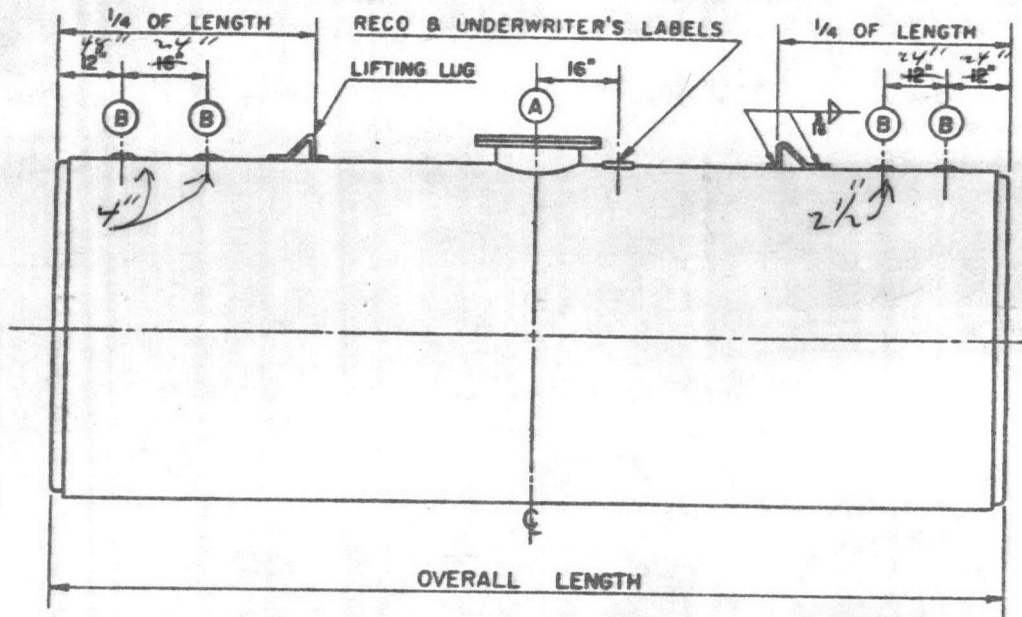
6-11-3-COUD ADL 5-2 11-29-60 MR. DESCRIPTION REVISIONS JOB NO. DATE 11-29-60	DRAWN BY D.F.B. CHECKED BY J.S.L. APPROVED BY
--	---

REFERENCE DRAWING SCALE NAME DRAWING NUMBER 11-29-60



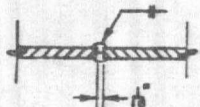
2- Hold Down Straps & Turn Buckles

See Detail on Heater

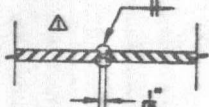


NOTE:

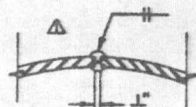
BUTT WELD (DET. "A") GIRTH & LONGITUDINAL SEAMS WHEN SHELL THK = 3/8"



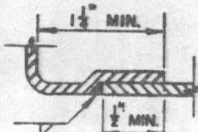
DETAIL "A"
HEAD SPLICE



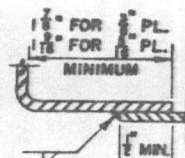
DETAIL "B" SHELL
GIRTH SEAM WELD



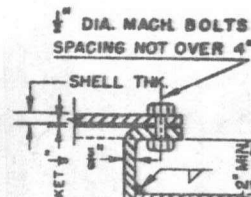
DETAIL "C" SHELL
LONGITUDINAL SEAM WELD



DETAIL "D" 1/2 PL
HEAD SEAM WELD



DETAIL "E" 3/8 PL
HEAD SEAM WELD



DETAIL "F"
MANHOLE WELD



DETAIL "G"
WELDING FLANGE WELD

CAPACITY IN GALLONS	DIA. O. D.	LENGTH OVERALL	SHELL THK	
5,000	6'-0"	24'-1 1/2"	1/4"	
5,000	6'-0"	13'-5 1/2"		
6,000		16'-1 1/2"		
7,000	18'-9 1/2"			
8,000	21'-5 1/2"			
10,000	26'-9 1/2"			
12,000	32'-1 1/2"			
10,000	10'-0"	17'-9 1/2"		5/16"
12,000	10'-0"	20'-5 1/2"		
10,000		15'-1 1/2"		
15,000	23'-1 1/2"			
20,000	31'-1 1/2"			
25,000	39'-3 1/2"			

NO. REQ'D One

NOTE
 1. UNLESS OTHERWISE SPECIFIED, PAINT OUTSIDE ONLY ONE COAT OF BLACK ASPHALT BASE PAINT.
 2. MIN. AIR TEST PRESSURE: 5 P.S.I.
 MAX. AIR TEST PRESSURE: 10 P.S.I.
 3. MATERIAL: COMMERCIAL GRADE STEEL OF GOOD WELDING QUALITY

1. PAINTED IN ACCORDANCE WITH TYPE I 34 yd.

ENGINEER _____

RICHMOND ENGINEERING CO., INC.
RICHMOND VIRGINIA

STANDARD UNDERGROUND HORIZONTAL BULK STORAGE TANK

CUSTOMER Sneed's Inc P.O. NO. _____

JOB Combat Vehicle Maint. Shops

REPRESENTATIVE _____

JOB NO. _____ DRAWN BY _____
 DATE Apr. 10, 1964 APP'D BY _____

DRAWING NO.
C - 61 - 13 - 1

PLANING DIVISION, BUREAU OF YARDS & DOCKS
NORFOLK 11, VA.

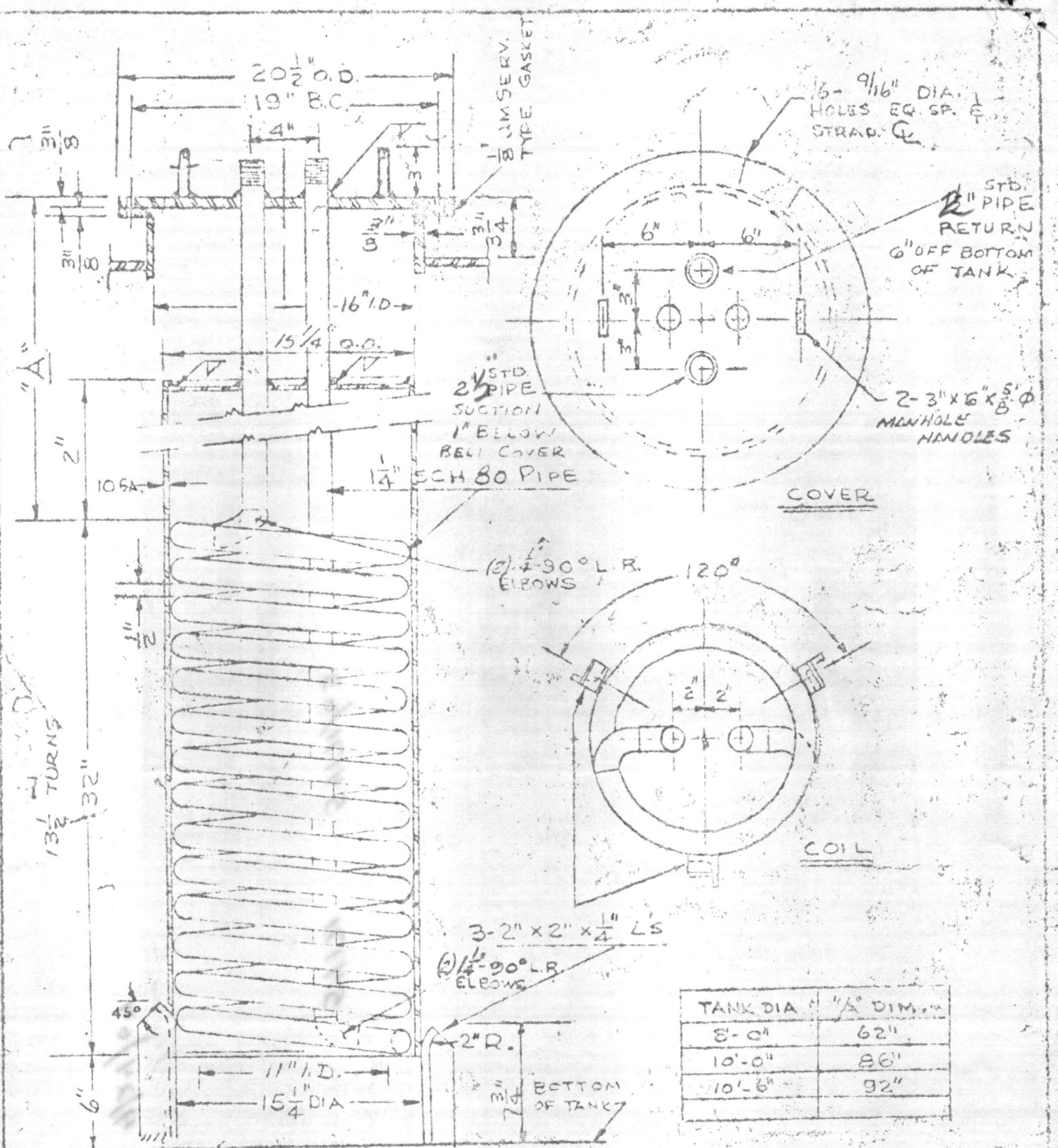
APPROVED: *AS NOTED*

SUBJECT TO THE REQUIREMENTS OF

CONTRACT NO. *54171* SPEC *54171/63*
APPROVAL OF MATERIALS AND/OR EQUIPMENT
INDICATES COMPLIANCE WITH SPECIFICATION
REQUIREMENTS ONLY — THE CONTRACTOR
SHALL BE RESPONSIBLE FOR PROVIDING
PROPER PHYSICAL DIMENSIONS & WEIGHTS,
COORDINATION OF TRADES, ETC., AS REQUIRED.

W. C. G. Church
Date *4/24/64*

W. C. G. CHURCH
RADM, CEC, USN
DIRLANTDOCKS



TANK DIA	"A" DIM.
8'-0"	62"
10'-0"	86"
10'-6"	92"

RICHMOND ENGINEERING CO., INC.
 RICHMOND VIRGINIA

6-17-63 *DFB*
 CHANGED 1/4" SCH 40
 ROLLED PIPE TO SCH 80
 JOB NO. DRAWN BY
DFB
 STD.
 DATE
 9-19-53

HEATING COIL FOR STORAGE TANK
 25 SQ FT HEATING SURFACE

SCALE: NONE
 DRAWING NUMBER
 A-62-145-1

ATLANTIC DIVISION, BUREAU OF YARDS & DOCKS
NORFOLK 11, VA.

APPROVED: *AS NOTED*

SUBJECT TO THE REQUIREMENTS OF

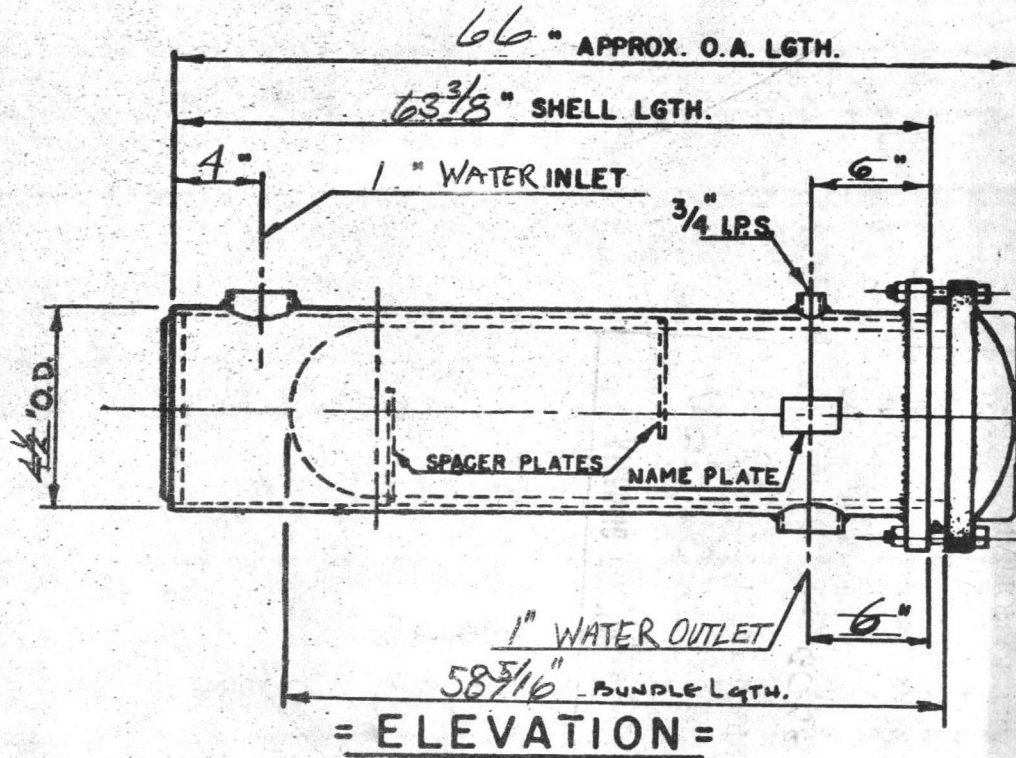
CONTRACT NBY *54171* SPEC *54171/63*

APPROVAL OF MATERIALS AND/OR EQUIPMENT
INDICATES COMPLIANCE WITH SPECIFICATION
REQUIREMENTS ONLY — THE CONTRACTOR
SHALL BE RESPONSIBLE FOR PROVIDING
PROPER PHYSICAL DIMENSIONS & WEIGHTS.
COORDINATION OF TRADES, ETC., AS REQUIRED.

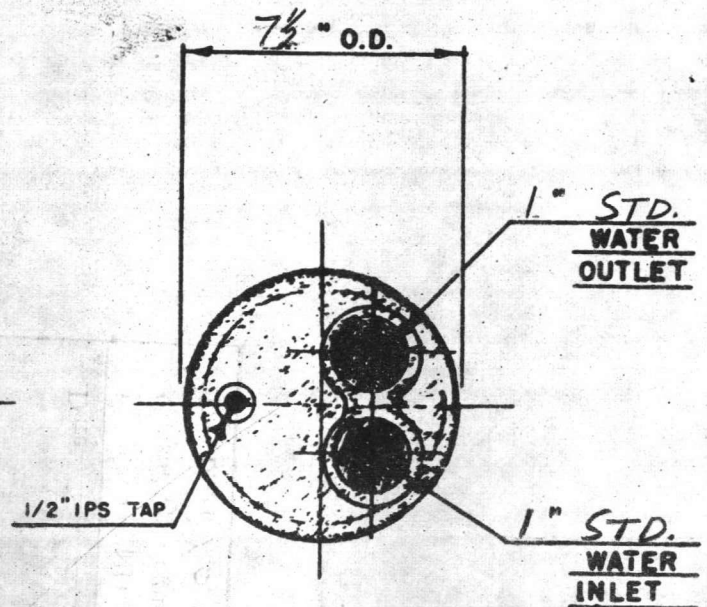
W. C. G. Church
Date *4/24/64*

W. C. G. CHURCH
RADM. CEC, USN
DIRLANTDOCKS

OIL STORAGE TANK M-625



= ELEVATION =



= END VIEW =

TAG: CAMP LEJEUNE

APPROX. WGT. 113 LBS.

SPECIFICATIONS

SHELL
 1. DESIGN WORKING PRESSURE 125 PSI TEST PRESSURE 188 PSI
 2. CONSTRUCTION: FUSION WELDED PER ASME CODE AND SO STAMPED
 OTHER:
 3. MATERIAL SAS3 - SCH 40 PIPE
 4. PAINT ALUM EXT. ONLY
HEATING ELEMENT (REMOVABLE TYPE)
 5. DESIGN WORKING PRESSURE 125 PSI TEST PRESSURE 250 PSI
 6. CAPACITY TO COOL 740 ^{°R} FROM 225 °F TO 125 °F WHEN SUPPLIED WITH 3 GPM WATER FROM 70 °F TO 119 °F IN TUBES.
 7. MATERIAL TUBING: 3/4" O.D x 18 B.W.G. COPPER ELEMENT HEAD: C.I.
 TUBESHEET: STEEL SPACER PLATES: STEEL
 8. PRESSURE DROP IN FT. OF WATER: _____ F.F. - 0.001

NO. UNITS REQD. ONE (1)
 MINIMUM HTG. SURFACE _____

ARCH: _____ ENG: _____
 JOB: _____
 CUSTOMER: Boiler Brick & Ref. Co. P.O. NO. 1388
 AGENT: _____ AG. NO. _____

NO.	DATE	BY	DESCRIPTION

HEAT EXCHANGERS SW4-66-4
 COIL SIZE U4F-60-4
 4 PASS UNIT

SCALE	DATE	DRAWN	CHECKED	APPROVED	ISSUED
NONE	4/14/65	SCR			

Old Dominion Iron & Steel Corp.
 Belle Isle, Richmond 3, Virginia
 Draw No. H 565-923-C

ATLANTIC DIVISION, BUREAU OF YARDS AND DOCKS
NORFOLK 11, VA.

APPROVED

SUBJECT TO THE REQUIREMENTS OF

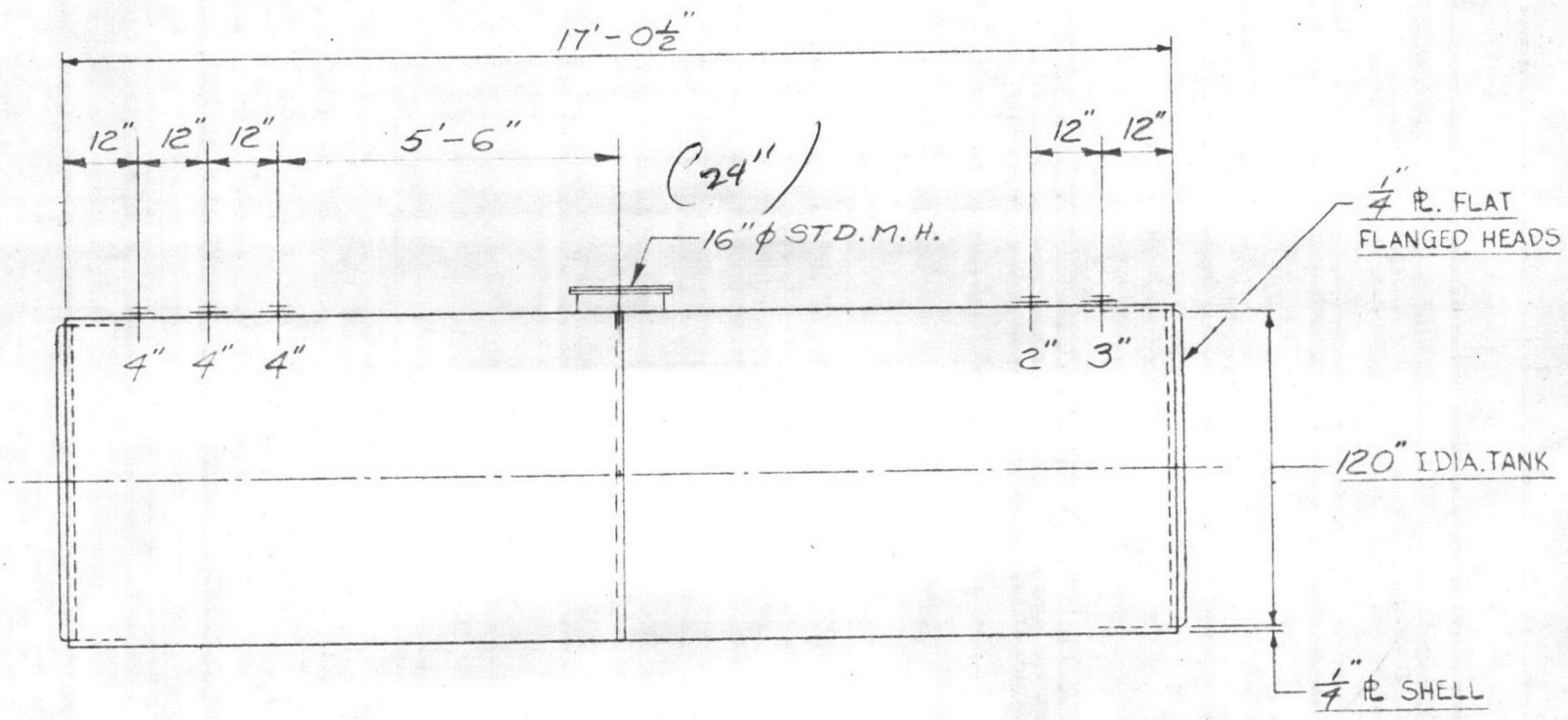
CONTRACT NBy 60580 SPEC. 60580/65
APPROVAL OF MATERIALS AND/OR EQUIPMENT
INDICATES COMPLIANCE WITH SPECIFICATION
REQUIREMENTS ONLY — THE CONTRACTOR
SHALL BE RESPONSIBLE FOR PROVIDING
PROPER PHYSICAL DIMENSIONS & WEIGHTS,
COORDINATION OF TRADES, ETC., AS REQUIRED.

Date 13 JUL 1965 DMJ N.J. DRUSTRUP
RADM. CEC. USN
DIRLANTDOCKS

FENNER AND PROFFITT
Consulting Engineers

P. O. Box 1260
Wilson, N. C.

Date JULY 8, 1965 Checked by W.F.F.



NO. _____
 REVISIONS
 REMARKS
 DATE BY

BUFFALO TANK CORPORATION
 SPATCO, INC.
 CHARLOTTE, N.C.

CUSTOMER ORDER NO.
 33514
 SCALE
 DRAWN BY A.D.
 CHECKED BY
 APPROVED

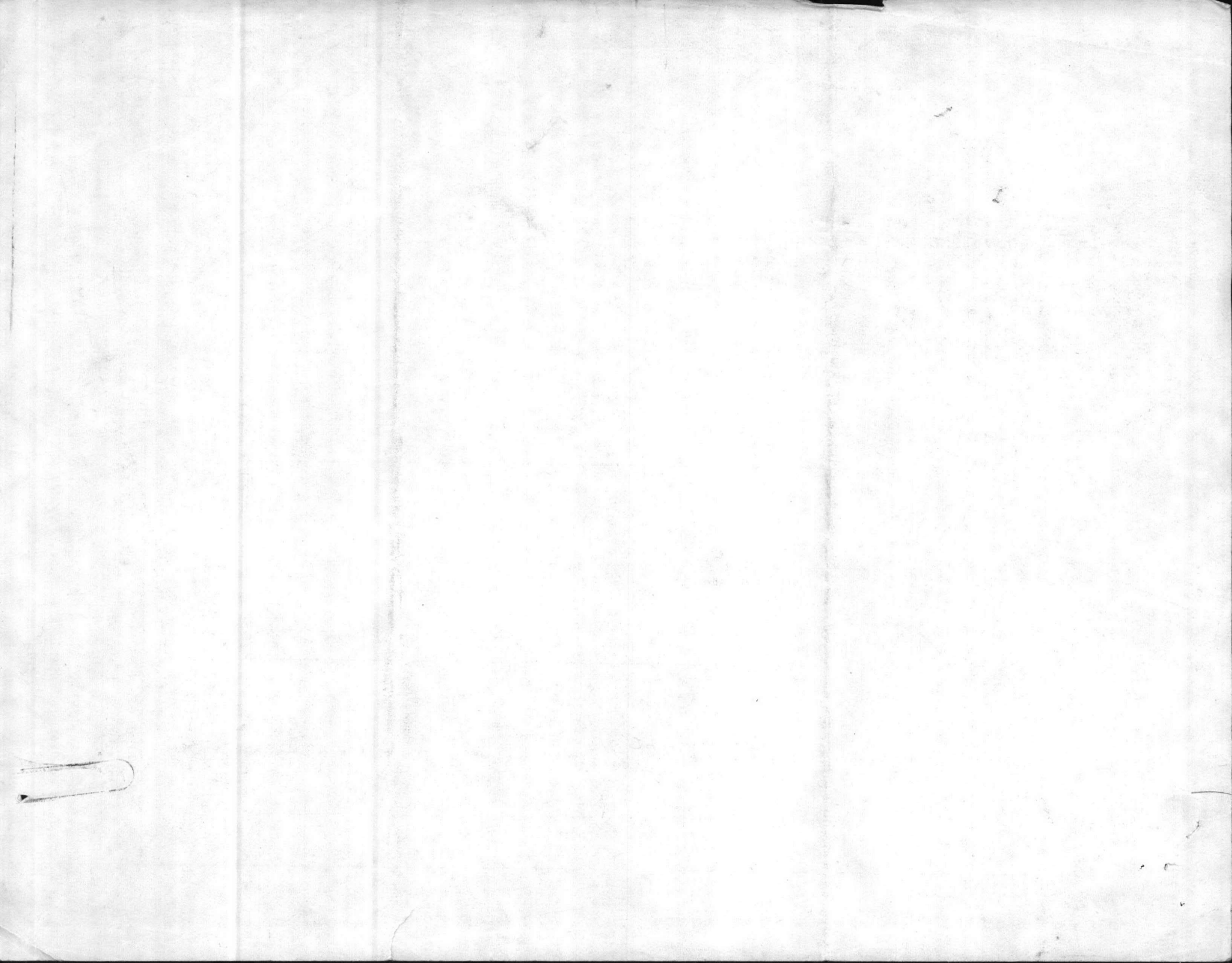
CONTRACT NO.
 T-1714
 SHEET NO.
 DRAWING NO.
 N-4373
 DATE
 8/29/57

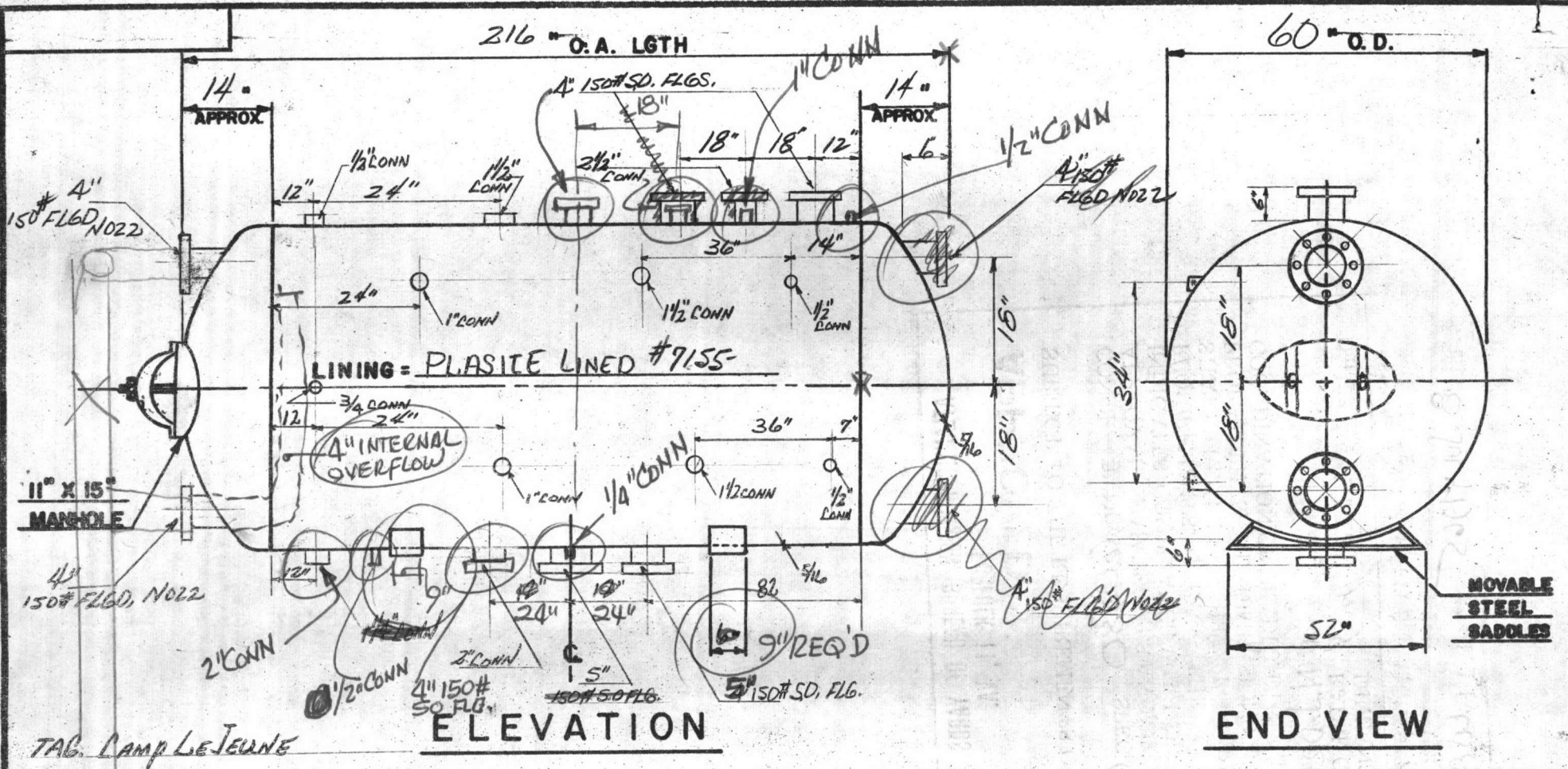
TWO (2) TANKS REQ'D.
 CAPACITY - 10000 GALLONS
 UNDERWRITERS UNDERGROUND.

MATERIAL: M O H STEEL
 WELDING: HEAD SEAMS - CONTINUOUS LAP WELD
 OUTSIDE ONLY.
 SHELL SEAMS - CONTINUOUS LAP WELD
 OUTSIDE & TACK WELD 1 1/2" IN 12" INSIDE.
 TEST: 5 PSIG. AIR PRESSURE.
 PROVIDE UNDERWRITERS UNDERGROUND LABEL.
 PAINT: ONE SHOP COAT BLACK ASPHALTUM
 OUTSIDE ONLY.

JOB: INDUSTRIAL EQUIPMENT CO.
 CAMP LEJUENE, N.C.

10





SPECIFICATIONS:

NO UNITS REQ'D. ONE (1)

- TANK**
- DESIGN WORKING PRESSURE 30 P.S.I., TEST PRESSURE 45 P.S.I.
 - CONSTRUCTION FUSION WELDED AS PER 1962 A.S.M.E. CODE AND SO STAMPED
 - MATERIAL: A212-B-FQS
 - PAINT ALUMINUM (OUTSIDE ONLY)
 - CAPACITY: 2533 GALS., MAX. DESIGN TEMP: 250 °F
 - APPROX. WT. 4493 LBS.

ARCH. _____ ENG. _____

JOB: _____

CUST: BOILER BRICK RES. Co. P.O. NO. 1388

AGENT: _____ P.O. NO. _____

STORAGE TANK
ODIS P-60-216-H
CONDENSATE TANK

NO.	DATE	BY	DESCRIP'TN	SCALE	DATE	DRAWN	CHECKED	APPROVED	ISSUED
				NONE					

REVISIONS

Old Dominion Iron & Steel Corp.
Belle Isle, Richmond 3, Virginia
Draw No. M-565-923-A

ATLANTIC DIVISION, BUREAU OF YARDS AND DOCKS
NORFOLK 11, VA.

APPROVED "AS NOTED"
SUBJECT TO THE REQUIREMENTS OF

CONTRACT NBY 60580 SPEC 60580/65
APPROVAL OF MATERIALS AND/OR EQUIPMENT
INDICATES COMPLIANCE WITH SPECIFICATION
REQUIREMENTS ONLY — THE CONTRACTOR
SHALL BE RESPONSIBLE FOR PROVIDING
PROPER PHYSICAL DIMENSIONS & WEIGHTS,
COORDINATION OF TRADES, ETC., AS REQUIRED.

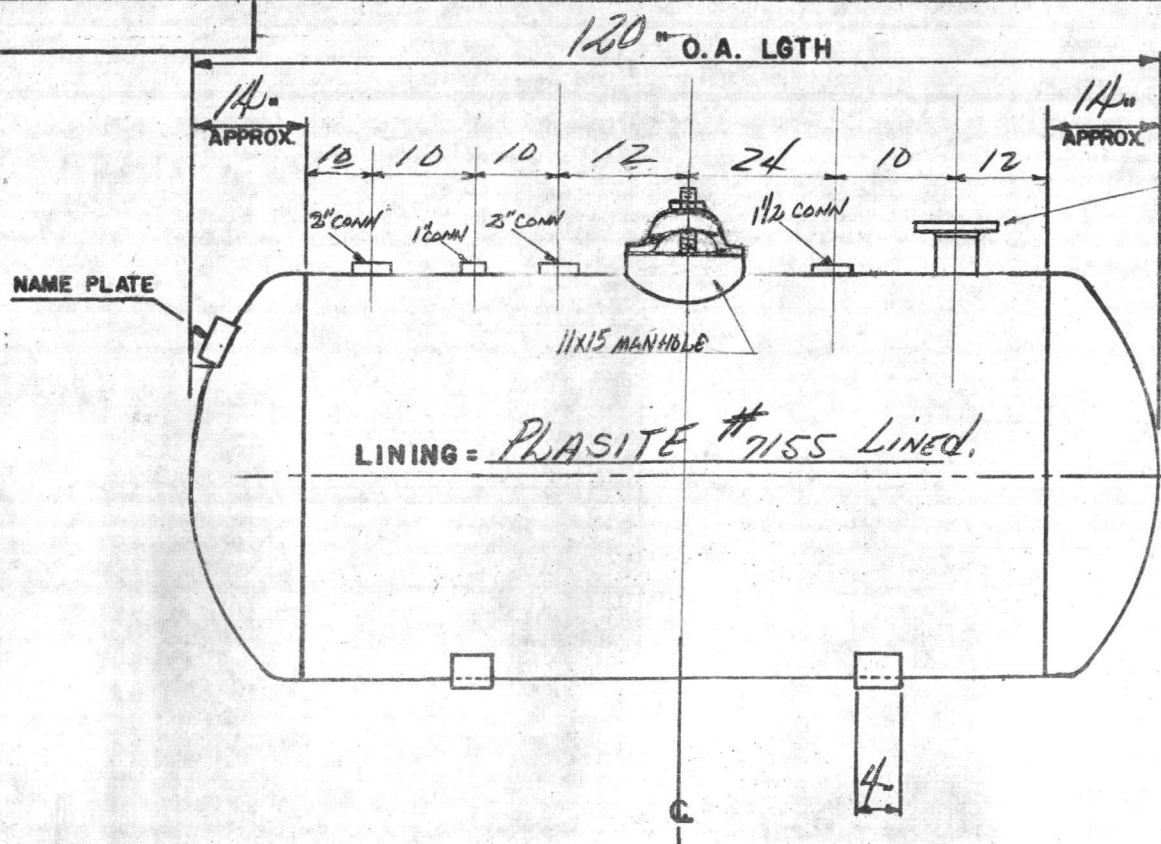
N.J. DRUSTRUP
RADM, CEC, USN
DIRLANTDOCKS

Date 13 JUL 1965 DMJ

FENNER AND PROFFITT
Consulting Engineers

P. O. Box 1260
Wilson, N. C.

Date 8 JUL 1965 Checked by WST



LINING = PHASITE #7155 LINED.

NAME PLATE

11x15 MANHOLE

120" O.A. LGTH

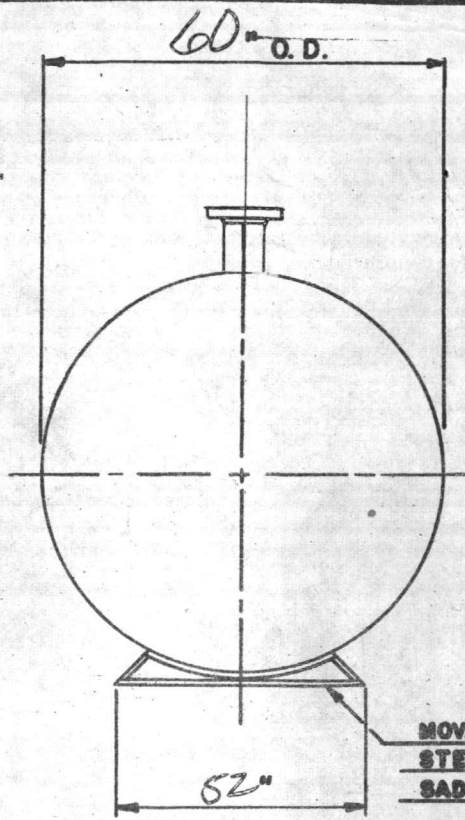
14" APPROX

14" APPROX

10 10 10 12 24 10 12

2" CONN 1" CONN 3" CONN 1 1/2" CONN

4"



60" O.D.

2 1/2" 150# S.D. FLG.

MOVABLE STEEL SADDLES

52"

ELEVATION

END VIEW

TAG - CAMP LEJEUNE

SPECIFICATIONS: NO UNITS REQ'D. ONE (1)

TANK

- DESIGN WORKING PRESSURE 30 P.S.I., TEST PRESSURE 45 P.S.I.
- CONSTRUCTION FUSION WELDED AS PER 1962 A.S.M.E. CODE AND SO STAMPED
- MATERIAL: A212-B FDS.
- PAINT ALUMINUM (OUTSIDE ONLY)
- CAPACITY = 1358 GALS., MAX. DESIGN TEMP. = 250 °F
- APPROX. WT. 2565 LBS.

ARCH. _____ ENG. _____

JOB: _____

CUST: BOILER BRICK & REF. Co. P.O. NO. 1388

AGENT: _____ P.O. NO. _____

STORAGE TANK

ODIS^P-60-120-H

Soft water tank

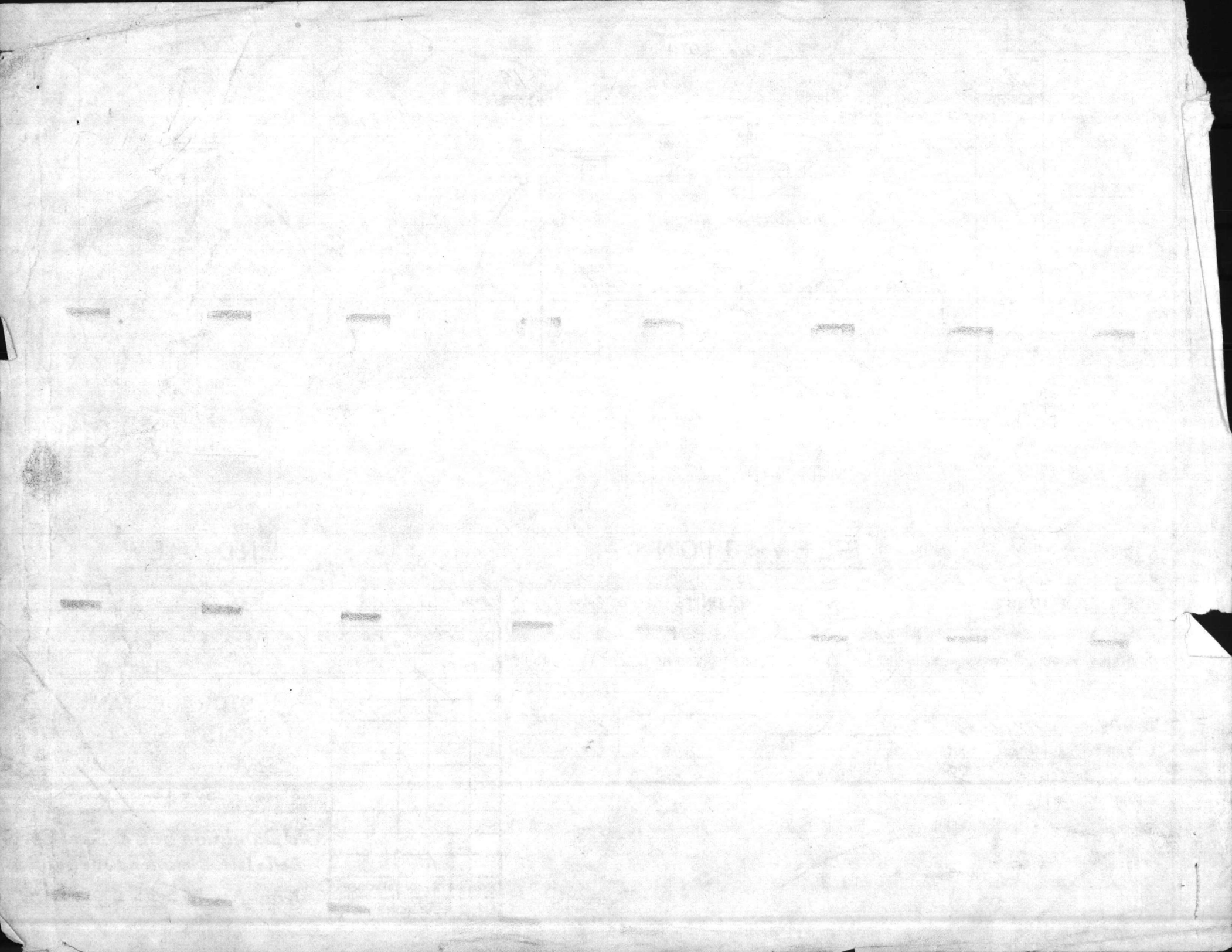
SCALE	DATE	DRAWN	CHECKED	APPROVED	ISSUED
NONE	6/29/65	SCB			

Old Dominion Iron & Steel Corp.
Belle Isle, Richmond 3, Virginia

Draw No. M-65-923-B

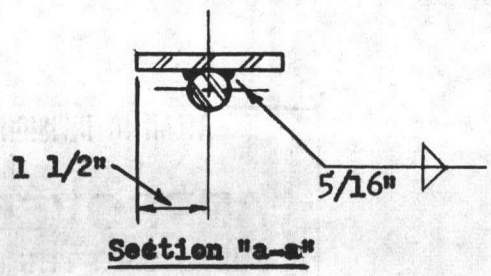
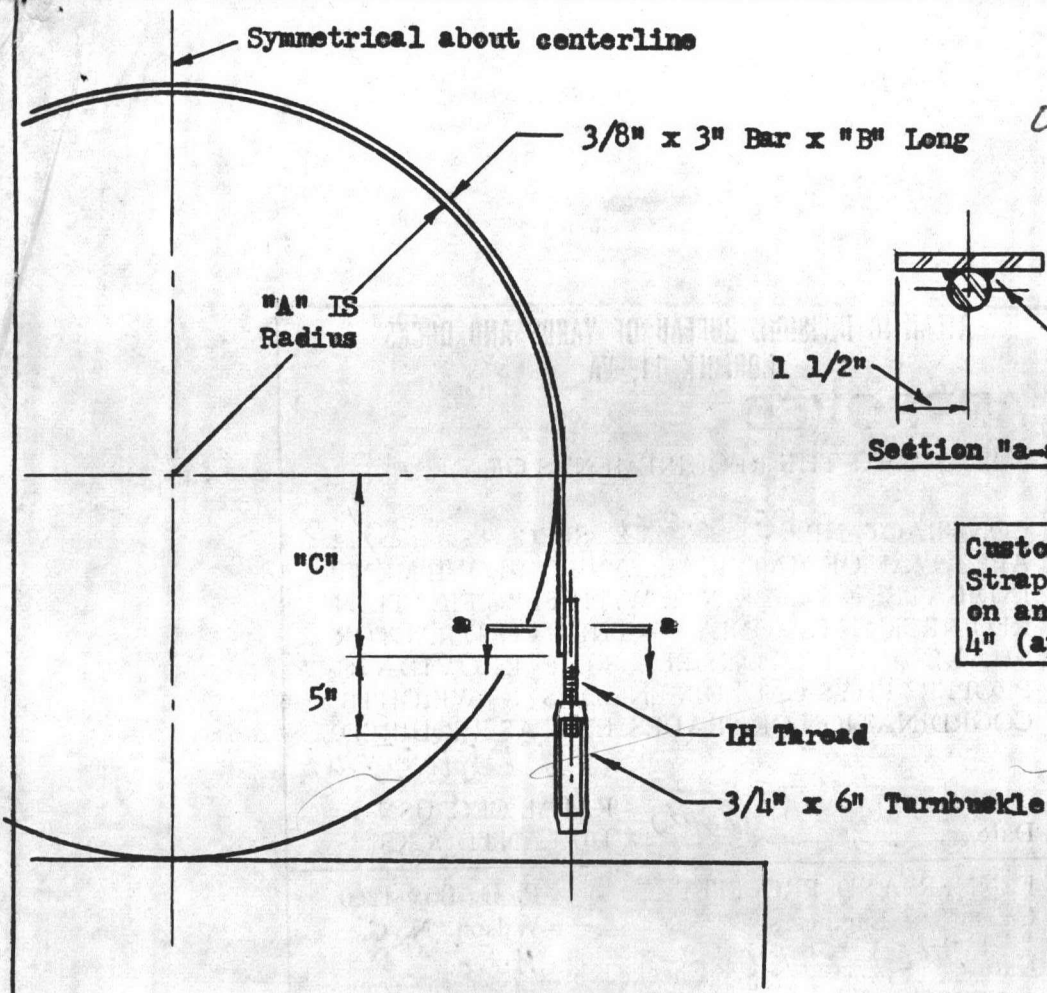
NO.	DATE	BY	DESCRIP'TN
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REVISIONS



M-625

OIL STORAGE TANK



Customer Note:
Strap dimensions are based on anchor belts projecting 4" (approx.) above pad.

Strap No.	Tank Diameter	"A"	"B"	"C"	Weight Each
S 21 A	48"	24 1/4"	8'-3"	11 1/4"	38 lbs.
S 21 B	49 1/2"	25"	8'-7 1/8"	12"	39
S 21 C	64"	32 1/4"	11'-8 3/8"	19 1/4"	51
S 21 D	65"	32 3/4"	11'-11"	19 3/4"	52
S 21 E	72"	36 1/4"	13'-5"	23 1/4"	58
S 21 F	84"	42 3/8"	16'-0 1/2"	29 3/8"	68
S 21 G	96"	48 3/8"	18'-7 3/8"	35 3/8"	78
S 21 H	120"	60 3/8"	23'-9"	47 3/8"	98
S 21 J	126"	63 1/2"	25'-0 1/8"	50 1/2"	103

				BUFFALO TANK DIVISION BETHLEHEM STEEL COMPANY	
				STANDARD HOLD DOWN STRAP w/TURNUCKLES	
DATE 1-9-60		CUST. ORDER		DRAWING	
DRAWN		CONTRACT		S-33	
NO.	REVISION	BY	DATE		

ATLANTIC DIVISION, BUREAU OF YARDS AND DOCKS
NORFOLK 11, VA.

APPROVED

SUBJECT TO THE REQUIREMENTS OF

CONTRACT NBy. 60580 SPEC. 60580/65
APPROVAL OF MATERIALS AND/OR EQUIPMENT
INDICATES COMPLIANCE WITH SPECIFICATION
REQUIREMENTS ONLY — THE CONTRACTOR
SHALL BE RESPONSIBLE FOR PROVIDING
PROPER PHYSICAL DIMENSIONS & WEIGHTS,
COORDINATION OF TRADES, ETC., AS REQUIRED.

N. J. DRUSTRUP

Date 13 JUL 1965 *Dm* RADM, CEC, USN
DIRLANTDOCKS

FENNER AND PROFFITT P. O. Box 1260
Consulting Engineers Wilson, N. C.

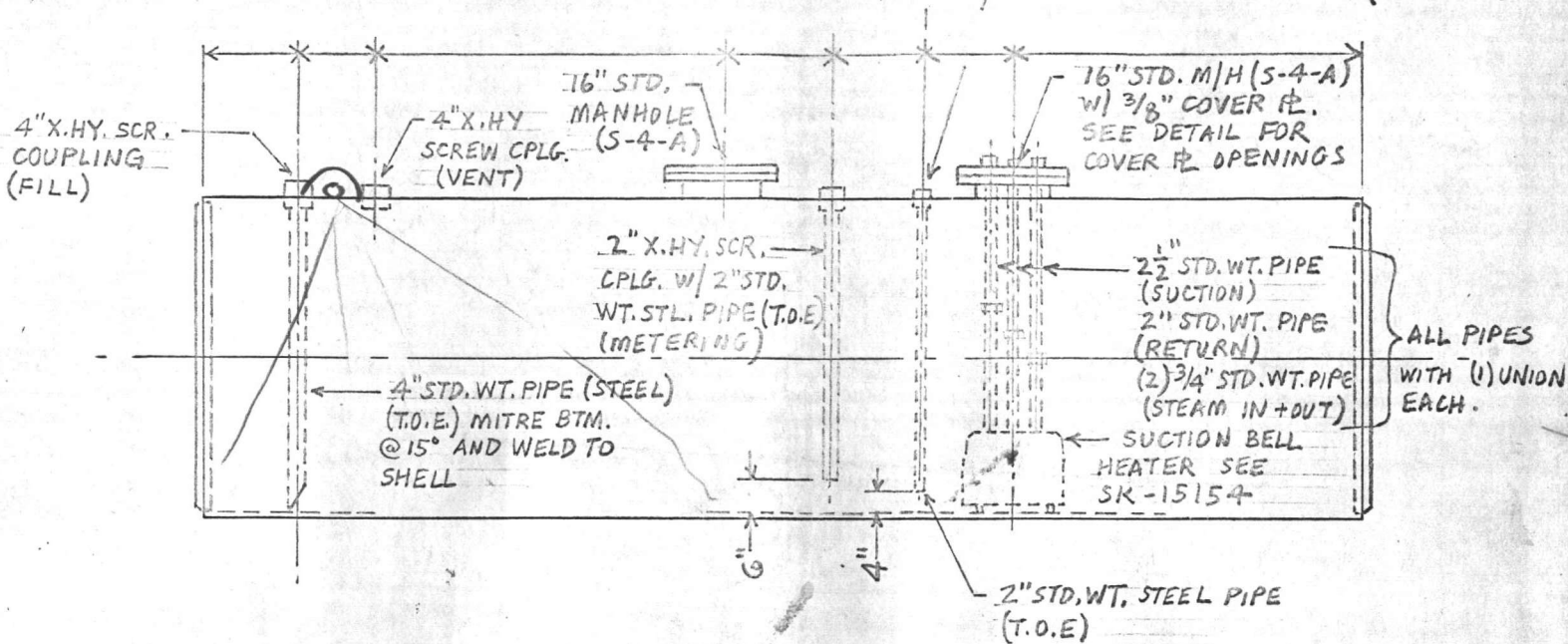
Date JULY 8, 1965 Checked by W.E.F.

10,000 1982

M-625
 BUFFALO TANK DIVISION
 BETHLEHEM STEEL COMPANY
 (INCORPORATED)

CUSTOMER BOILER BRICK & REFRACTORY CO., INC., RICHMOND, VA. DATE JUNE 21, 1965
 CAPACITY 30000 GALLON DIAMETER 126" 10" 6' LENGTH 46'-4 1/2"
 NUMBER REQUIRED ONE (1)

3" X. HY. SCREW COUPLING WITH
 3" X 2" BUSHING INSIDE (SENSING)



BUFFALO STORAGE TANK

ABOVEGROUND UNDERGROUND

MATERIAL: Hot Rolled Carbon Steel Plate

Shell Thickness 3/8"

Head Thickness 3/8" Type FLAT FLANGED

WELDING: All Seams Continuous Lap Weld Outside

Shell Seams Tack Weld Inside 1" in 12"

TEST PRESSURE: 5 P. S. I. Air

PAINT: ~~One Shop Coat~~ OUTSIDE SURFACES TO BE COATED IN ACCORDANCE WITH BUR. YARDS & DOCKS SPEC 34 Yd. INCLUDING HOLD DOWN STRAPS.

INSIDE TO BE COATED WITH PLASTIC 1711H (OR EQUAL)

PROVIDE UNDERWRITERS' LABEL

SHIP LOOSE: (4) S-21-J HOLD-DOWN STRAPS. SEE DWG. S-33
 SEE SHIPPING LIST

EST. TANK. WT. 27290#

U-48

ATLANTIC DIVISION, BUREAU OF YARDS AND DOCKS
NORFOLK 11, VA.

APPROVED

SUBJECT TO THE REQUIREMENTS OF

CONTRACT NBy 60580 SPEC 60580/05
APPROVAL OF MATERIALS AND/OR EQUIPMENT
INDICATES COMPLIANCE WITH SPECIFICATION
REQUIREMENTS ONLY - THE CONTRACTOR
SHALL BE RESPONSIBLE FOR PROVIDING
PROPER PHYSICAL DIMENSIONS & WEIGHTS,
COORDINATION OF TRADES, ETC., AS REQUIRED.

Date 9 AUG 1965

Dmd N. J. DRISTRUP
RADM, CEC, USN
DIRLANTDOCKS

FENNER AND PROFFITT
Consulting Engineers

P. O. Box 1260
Wilson, N. C.

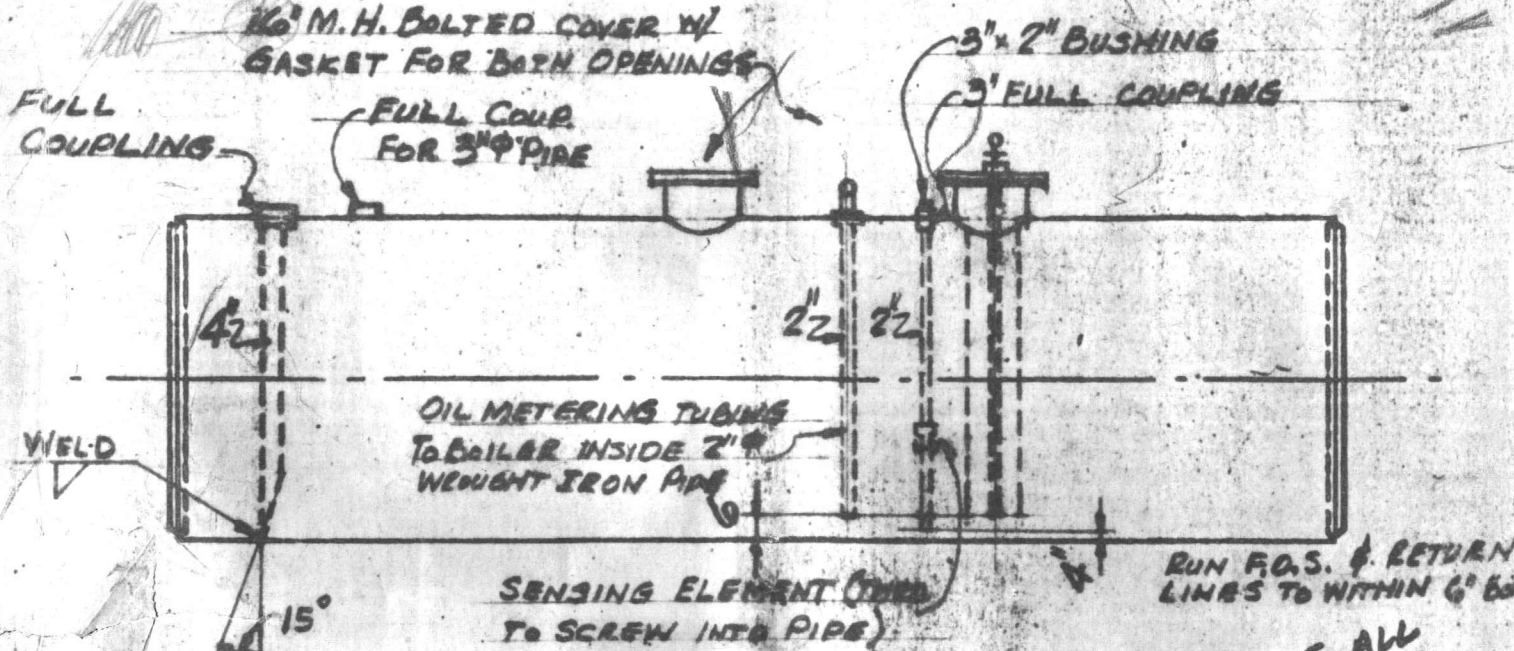
Date 8/2/65 Checked by WEF

BUFFALO TANK DIVISION
BETHLEHEM STEEL COMPANY
(INCORPORATED)

M-6215

TANK

CUSTOMER BOILER BRICK & REFRACTORY CO., INC., RICHMOND, VA. DATE JUNE 21, 1965
CAPACITY 30000 GALLON DIAMETER 126" LENGTH 46'-4 1/2"
NUMBER REQUIRED ONE (1)



BUFFALO STORAGE TANK
 ABOVEGROUND UNDERGROUND

MATERIAL: Hot Rolled Carbon Steel Plate
Shell Thickness 3/8"
Head Thickness 3/8" Type FLAT FLANGED

WELDING: All Seams Continuous Lap Weld Outside
Shell Seams Tack Weld Inside 1/8" in 12"

TEST PRESSURE: 5 P. S. I. Air

PAINT: ~~OUTSIDE SURFACES TO BE COATED~~
IN ACCORDANCE WITH BUR. YARDS & DOCKS SPEC 34 YEL. INCLUDING HOLD-DOWN STRAPS.
INSIDE TO BE COATED WITH PLASTIC IRON (OR EQUAL)

PROVIDE UNDERWRITERS' LABEL

LOCATE & SIZE ALL
OPENINGS REQ'D.
INDICATE HEATER
LOCATION.

SHIP LOOSE: (4) S-21-J HOLD-DOWN STRAPS. SEE DWG. S-33

ATLANTIC DIVISION, BUREAU OF YARDS AND DOCKS
NORFOLK 11, VA.

APPROVED

REQUIREMENTS OF
EST. TANK WT: 27290*

U-48 CONTRACT NO. 60580 SPEC 60580/65

APPROVAL OF MATERIALS AND/OR EQUIPMENT INDICATES COMPLIANCE WITH SPECIFICATION REQUIREMENTS ONLY - THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROPER PHYSICAL DIMENSIONS & WEIGHTS, COORDINATION OF TRADES, ETC., AS REQUIRED.

Date 18 JUL 1965 W.F.
N. J. DRUSTRUP
RADM, CEG, USN
DIRLANTDOCKS

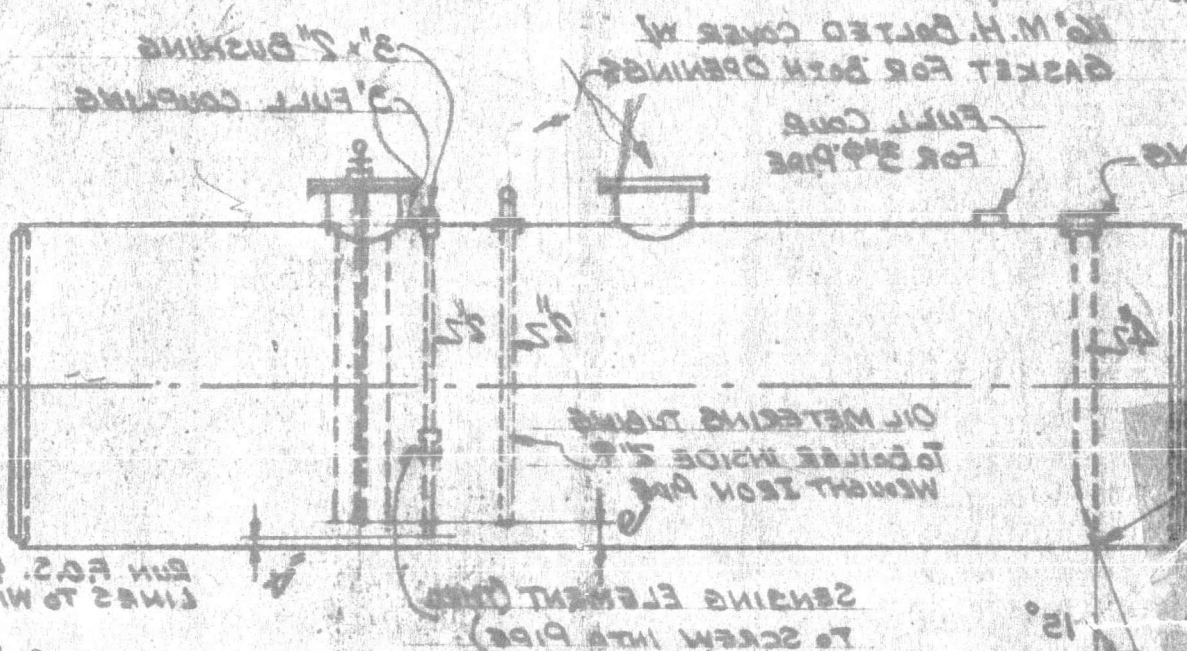
FENNER AND PROFFITT
Consulting Engineers
P. O. Box 1260
Wilson, N. C.

Date JULY 2, 1965 Checked by W.F.

CONTRACT NO. X-4264 R

CUSTOMER: BOILER BRICK & REFRACTORY CO. INC. RICHMOND, VA. DATE: JUNE 21, 1952
CAPACITY: 3000 GALLON DIAMETER: 15" LENGTH: 48'-4 1/2"

NUMBER REQUIRED: ONE (1)



RUN A.C.S. & RETURN LINES TO WITHIN 6\"/>

BUFFALO STORAGE TANK
 ABOVEGROUND UNDERGROUND

MATERIAL: Hot Rolled Carbon Steel Plate

Shell Thickness: 3/8" Type PLAT FRANGED
Head Thickness: 3/8"

WELDING: All Seams Continuous Lap Weld Outside
Shell Seams Tack Weld Inside in 12"

TEST PRESSURE: 2 P.S.I. AIR
PAINT: PROVIDE UNDERWRITERS' LABEL INSIDE TO BE COATED WITH PASTIC (EPOXY OR EQUAL)
IN ACCORDANCE WITH BUREAU OF PORTS SPEC. 54. THE EXPANDING HOLD BOND STRIPS
OUTSIDE SURFACES TO BE COATED

LOCATE & SIZE ALL OPENINGS REQ'D. INDICATE HEATER LOCATION

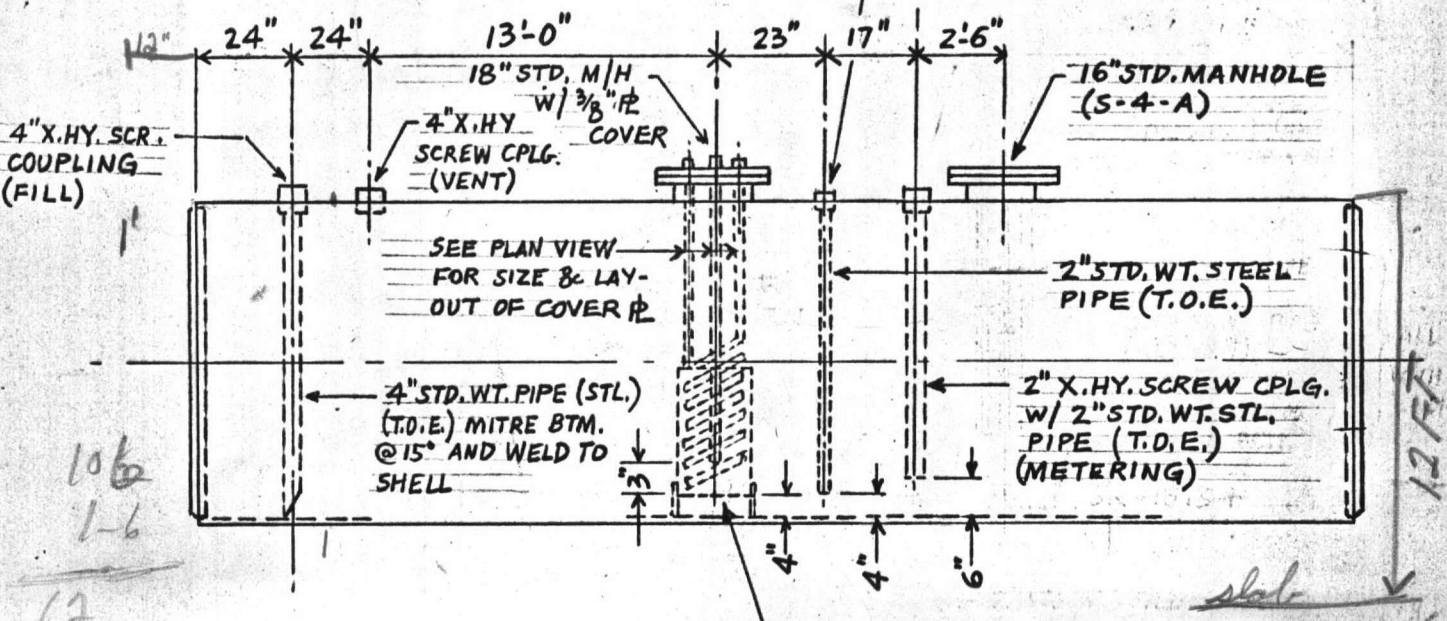
DOWN 2 TRAPS. SEE DWG. 2-33
SHIP LOOSE; (+) 2-21-1 HOLD-

TANK WT. 27500

U-42	6550	6550

M-625
BUFFALO TANK DIVISION
 BETHLEHEM STEEL COMPANY
 (INCORPORATED)

CUSTOMER BOILER BRICK & REFRACTORY CO., INC., RICHMOND, VA. DATE JUNE 21, 1965
 CAPACITY 30000 GALLON DIAMETER 126" LENGTH 46'-4 1/2"
 NUMBER REQUIRED ONE (1)



BUFFALO STORAGE TANK

ABOVEGROUND UNDERGROUND

REMPE (OR EQUAL) PREHEATER
 TO HEAT 400 GALLONS PER HOUR
 FROM 60°F TO 120°F USING
 STEAM AT 30 P.S.I.G.

MATERIAL: Hot Rolled Carbon Steel Plate

Shell Thickness 3/8"
 Head Thickness 3/8" Type FLAT FLANGED

WELDING: All Seams Continuous Lap Weld Outside

Shell Seams Tack Weld Inside 1/4" in 12"

TEST PRESSURE: 5 P. S. I. Air

PAINT: ~~One Shop Coat~~ OUTSIDE SURFACES TO BE COATED
 IN ACCORDANCE WITH BUR. YARDS & DOCKS SPEC
 34 YD. INCLUDING HOLD-DOWN STRAPS.
 INSIDE TO BE COATED WITH PLASTIL 1711H (OR EQUAL)

SHIP LOOSE: (4) S-21-J HOLD-DOWN STRAPS. SEE DWG. S-33
 SEE SHIPPING LIST

PROVIDE UNDERWRITERS' LABEL

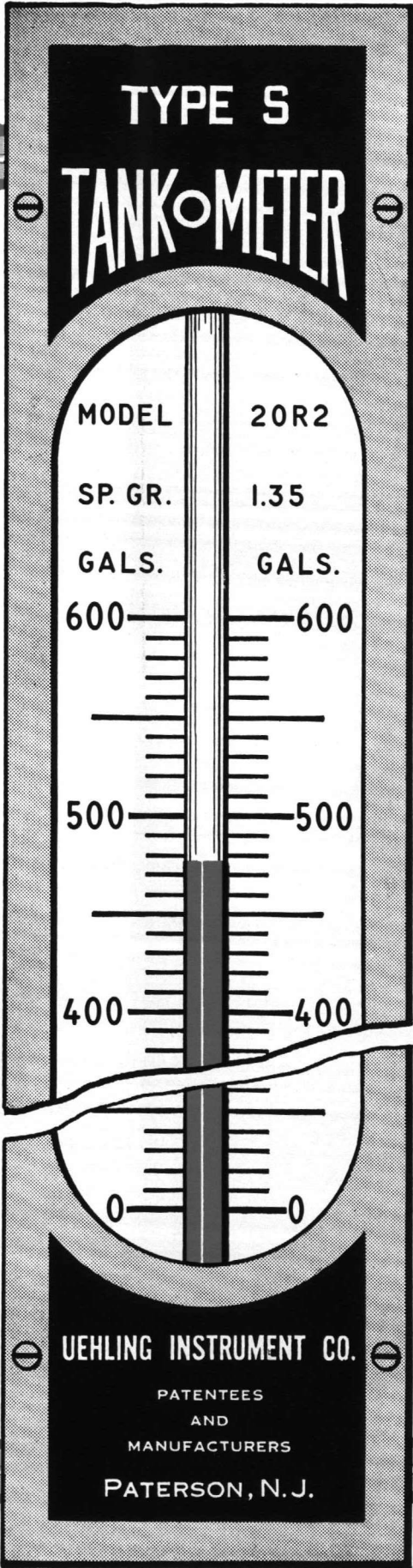
EST. TANK. WT. 27290#

U-48

MI-558

13-10

ROBERT S. HUDGINS CO.
 - CHEMICAL PROCESS EQUIPMENT & CONTROLS -
 P. O. Box 17217 - Charlotte 7, N. C.
 PHONE 366-4887



Uehling
TANK-O-METER



UEHLING INSTRUMENT CO.
 PIONEER MANUFACTURERS OF HYDROSTATIC INSTRUMENTS
PATERSON NEW JERSEY

Actual Size



TANK-O-METER

For Measuring Tank Contents Any Distance Away



BULLETIN

NUMBER 945

EIGHTY years experience in the manufacture of hydrostatic instruments has placed the Uehling Instrument Company in an authoritative position with respect to depth gauges that meet the present day demand for accuracy and dependability. This instrument, known as the **Tank-O-Meter**, makes it possible to accurately measure the contents of tanks at any remote point, regardless of where the tanks themselves may be located. **Tank-O-Meters** are, therefore, particularly well suited for the very stringent requirements in the Chemical and Oil Industries for keeping close tabs on purchases, distribution, and consumption.

Type S **Tank-O-Meter** meets the most exacting requirements of modern engineering practice and combines extreme accuracy, reliability, and durability with an exceptionally attractive appearance. Each **Tank-O-Meter** is made of durable Aluminum with a glass front which provides exceptional legibility as illustrated in Figures 1, 2, and 3. The neat and attractive design is particularly appealing when the instruments are located in the office or at any other central point at a distance from the tanks which they serve.

It was the accuracy and dependability of the **Tank-O-Meter** as experienced in the industrial field which prompted the United States Government to specify this type of instrument for all Naval Combat and Maritime Commission Vessels such as Super-dreadnaughts, Aircraft Carriers, Cruisers, Destroyers, Floating Drydocks, Cargo Vessels, Tugs, Mine Layers, Mine Sweepers, Army and Navy Troop Transports, Landing Crafts, Seaplane and Destroyer Tenders. As a typical example of the flexibility of **Tank-O-Meters** it is of interest to note that on the "U. S. S. MISSOURI" there are two hundred and ten (210) Uehling **Tank-O-Meters** installed for measuring the contents of Fuel Oil, Lube Oil, Fresh Water, and Ballast Tanks in scattered location throughout the vessel. Nearly ten miles of copper tubing was necessary to connect the Tanks with the **Tank-O-Meters**, the latter being mounted on centrally located panel boards.

A LARGE CHOICE OF MODELS

Type S **Tank-O-Meters** are built in fifty-two different standard models for measuring liquid depths ranging from 12 inches to 900 inches (see table Page 7). This provides a flexibility which permits a large number of

ranges from which the customer may choose. Special ranges may, however, also be provided should this become necessary. Four indicating fluids of different specific gravities are available to the customer, Red Indicating Fluid No. 1, Red Indicating Fluid No. 2, Red Indicating Fluid No. 3, and Mercury. This makes it possible to provide a gauge most suitable for any specific conditions. Type S **Tank-O-Meters** may be calibrated in units of depth, such as inches or feet, units of weights, such as pounds or tons, or units of volume, such as gallons, barrels, drums, or cubic feet. When **Tank-O-Meters** are calibrated in units of linear depth, such as inches or feet, the only information required is the maximum depth to be measured, kind of liquid, and its specific gravity. However, when the **Tank-O-Meter** is to be calibrated in units of weight or volume, we must have all the inside dimensions of the tank or the tank capacity chart.

Tank-O-Meters can also be furnished with high or low level contactors for closing or opening electric circuits at any predetermined levels. This makes it possible to automatically actuate high or low level alarms, and to actuate pumps, motors, or valves, as required to automatically establish predetermined tank level conditions.

ACCURACY

Permanent accuracy is insured by the hydrostatic principle (see Page 6) and the extreme care utilized when the **Tank-O-Meter** is calibrated. Each **Tank-O-Meter** is provided with a scale specially made to suit the particular tank involved and the specific gravity of the liquid it contains. Type S **Tank-O-Meters** consequently lend themselves to the measurement of any liquid which seeks its own level.

APPLICATION

Tank-O-Meters are suitable for any tanks regardless of their location, or whether the tank is open, vented, under pressure, or under vacuum. They may be applied to the measurement of **Acids, Water, Oil, Gasoline, Alcohol, Solvents, Beverages, Alkalis, Tar, Molasses, Milk, Paints, Varnishes, Sodium Silicate, Formaldehyde, or any other chemical solution.** **Tank-O-Meters** may also be used to measure any other depth such as Tide Waters, Depth of Rivers, Wells, Tail or Head Race Levels, Draft of Ships, Ballast Tanks, Drydock Compartments, etc.

ACTUAL TANK-O-METER PHOTOGRAPHS

Fig. 1. Hand pump actuation; Fig. 2. Compressed air actuation; Fig. 3. Compressed air actuation with automatic switch for actuating high or low alarm, or for actuating pumps or valves to maintain predetermined high or low levels.

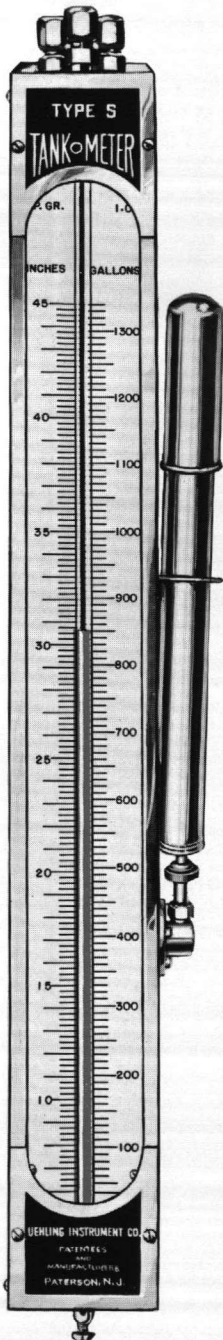


FIGURE 1

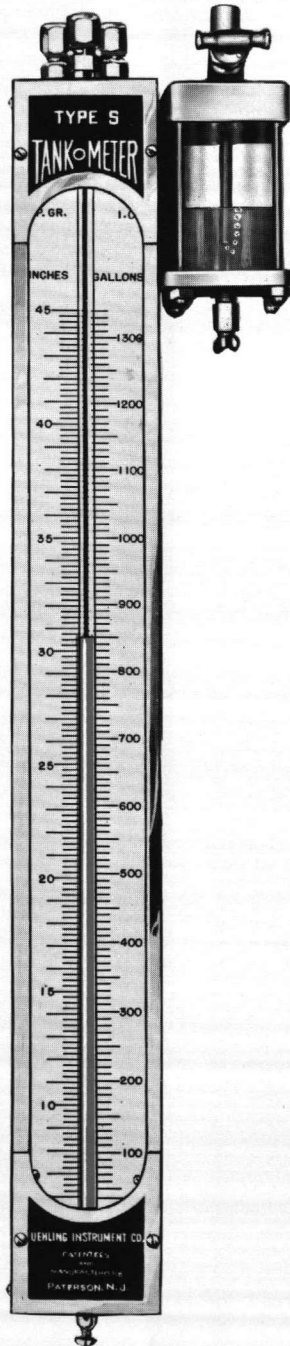


FIGURE 2

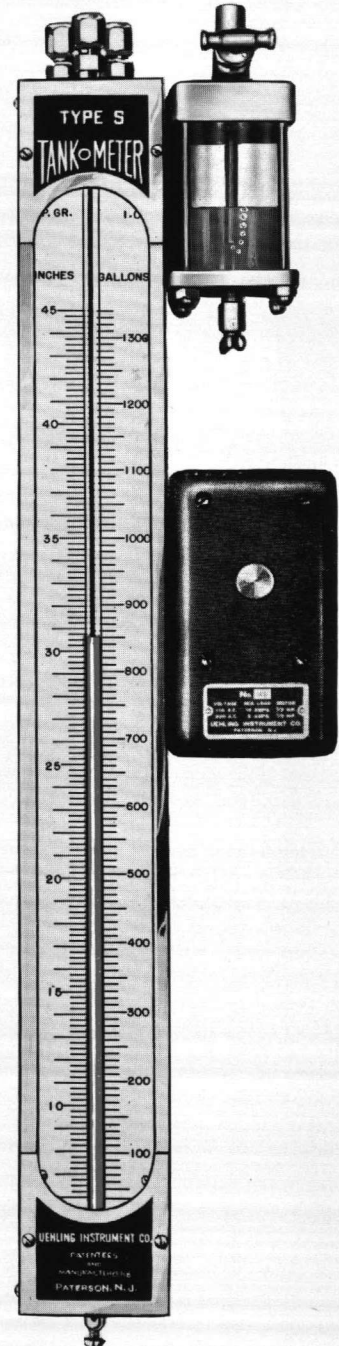


FIGURE 3

FLEXIBILITY

Uehling **Tank-O-Meters** lend themselves to an unlimited variety of applications, some typical examples of which are illustrated on the opposite page. When **Tank-O-Meters** are to be installed in some central location, they can be furnished completely assembled on panel boards, some actual examples of which are illustrated in Figures 4, 5, and 6. Panel board assemblies can be furnished for actuation by hand pump, compressed air, and with various combinations of automatic level alarms and regulators as illustrated.

As previously stated, **Tank-O-Meters** can be calibrated in units of depths, such as inches or feet, in units of volume, such as cubic feet, gallons, drums or barrels, or in units of weight, such as pounds, tons etc. In this connection, it should be particularly noted that for a vertical cylindrical tank or for any tank with parallel sides, the **Tank-O-Meter** when calibrated in units of weight, measures the correct contents even when various liquids of different specific gravities are placed in the tank. For example, it is possible to feed liquids of different specific gravities into a mixing tank and by means of a **Tank-O-Meter** establish the exact mixture required. As illustrated in Figure 9 on the opposite page, any weight of liquid as measured by a single **Tank-O-Meter** at the left can be fed into a mixing tank from any one or more of the tanks on the floor above as required to produce any desired mixture. A similar example is that of a concentration tank in which a given weight of liquid may be boiled down or evaporated until the desired degree of concentration, as measured by the **Tank-O-Meter**, has been obtained.

Special sanitary tank fittings can be furnished when measuring the contents of tanks containing milk, ice cream mix, soups, beverages, or any other liquid food products.

SOME IMPORTANT REASONS FOR INSTALLING TANK-O-METERS

The most practical and accurate means for measuring Tank contents.

A continuous knowledge of Tank contents is provided. Interruptions due to lack of supply are avoided.

Purchases can be checked with accuracy.

Readings before and after draw-offs determine amount used, thus facilitating accurate cost checking and eliminating waste.

Personal hazards due to corrosive acids, fumes, hot liquids, climbing tanks, etc., are avoided.

Tank-O-Meter may be located any distance from Tank. The contents of a Tank can be measured by two or more **Tank-O-Meters** located in different parts of the plant.

Errors and negligences due to the human equation are eliminated.

Proper ratios can be determined in mixing processes.

Degree of concentration can be determined in evaporation processes.

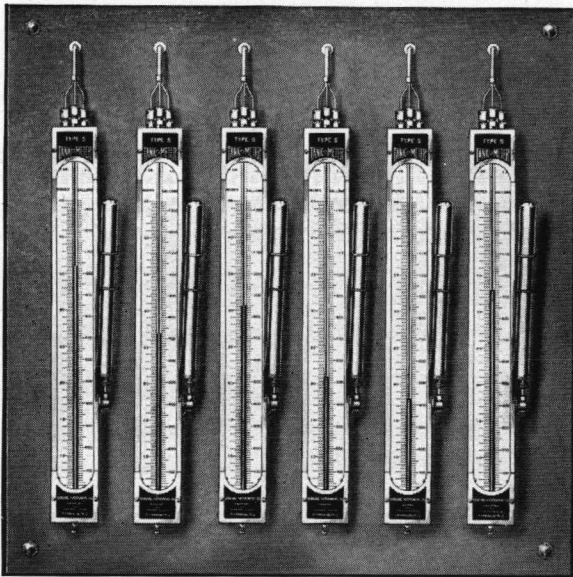


FIGURE 4—Typical Panel Board Tank-O-Meter Installation with Hand Pump Actuation.

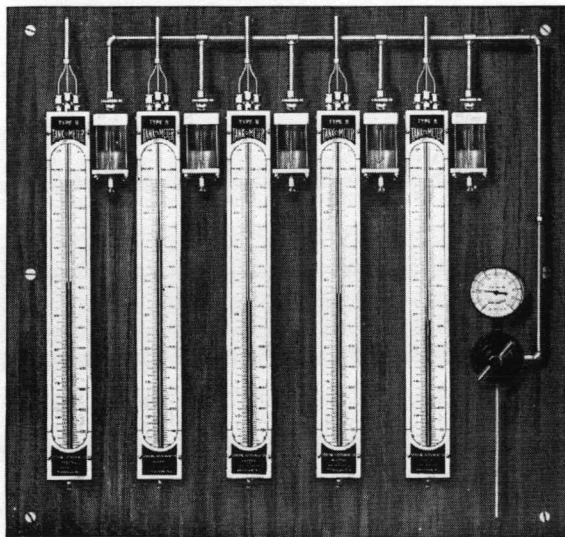


FIGURE 5—Typical Panel Board Tank-O-Meter Installation with Compressed Air Actuation.

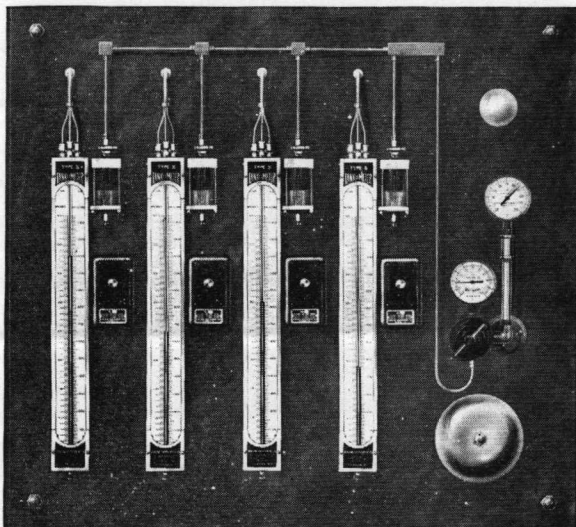


FIGURE 6—Typical Panel Board Tank-O-Meter Installation with Compressed Air Actuation and Automatic High Level Alarm.

A FEW TYPICAL ILLUSTRATIONS

SHOWING VARIOUS TYPES OF TANK-O-METER INSTALLATIONS

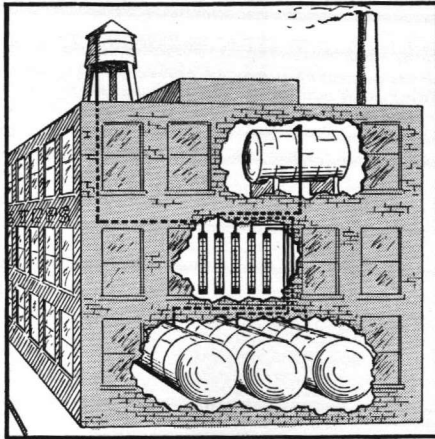


FIGURE 7—Showing tanks at different elevations with respect to centrally located Tank-O-Meters.

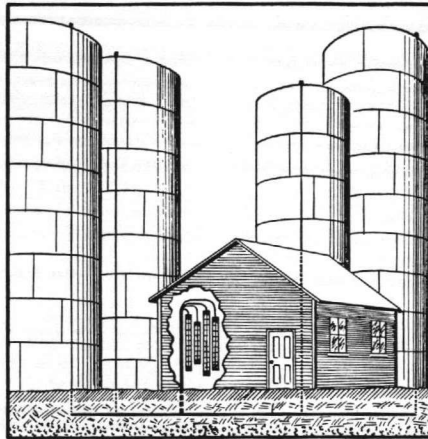


FIGURE 8—A farm of different sized vertical cylindrical tanks serviced by Tank-O-Meters.

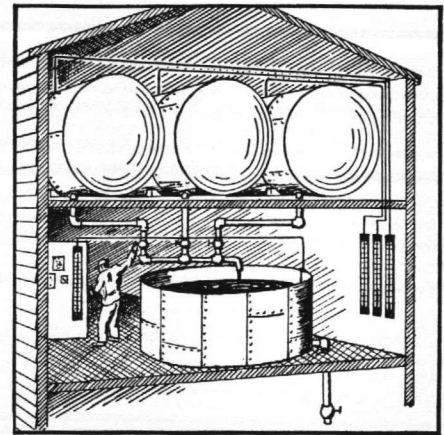


FIGURE 9—A complete measuring system for a mixing tank fed from three supply tanks.

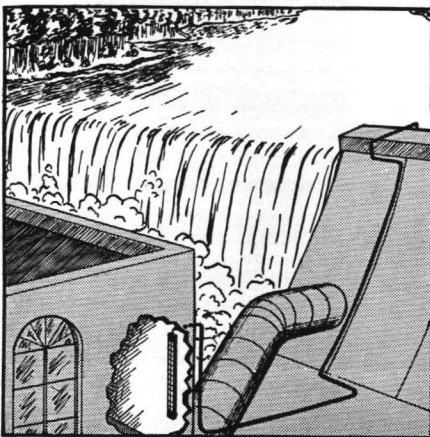


FIGURE 10—Measuring waterhead at the dam of a Hydro-electric Plant. Tank-O-Meter located in the power house.

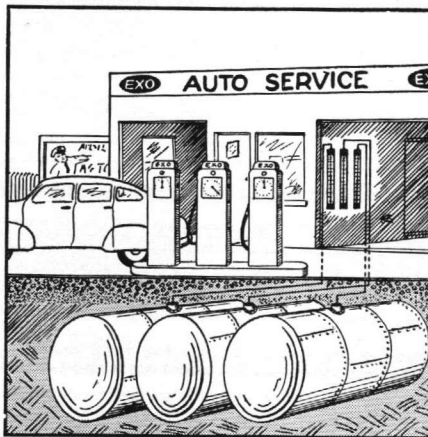


FIGURE 11—Keeping tabs of purchases and sales at a gas station where tanks are buried.

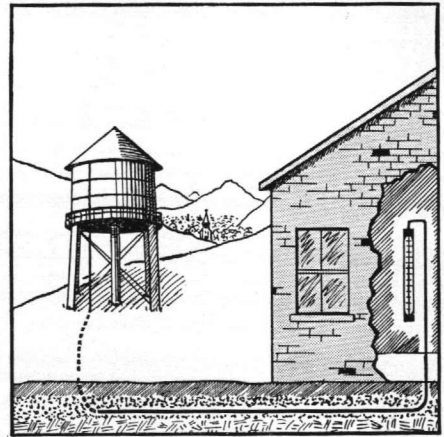


FIGURE 12—Typical water tower installation with connections to Tank-O-Meter buried.

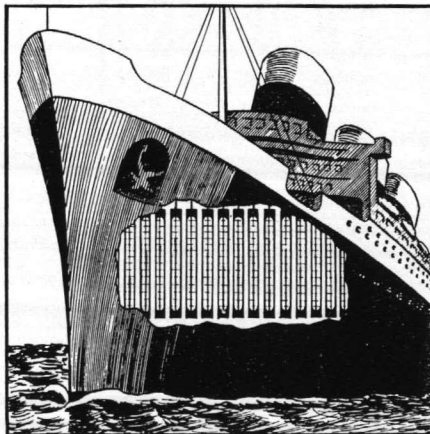


FIGURE 13—Centrally located Tank-O-Meters for measuring contents of Fuel Tanks, Water Tanks, Ballast Tanks & Draft.

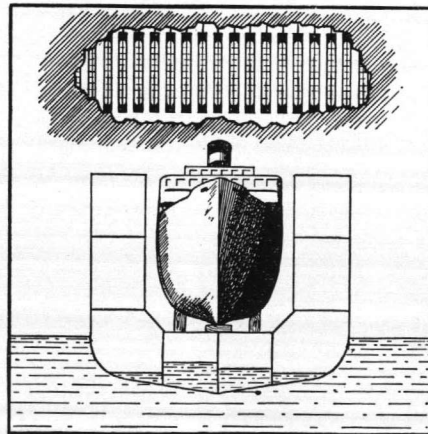


FIGURE 14—Centrally located Tank-O-Meters for measuring draft and water in all compartments of a drydock.



FIGURE 15—Modern locomotive equipped with Tank-O-Meters for Fuel, Oil and Water Tanks.

Hydrostatic Principle Insures Accuracy and Dependability

The hydrostatic principle is the most accurate method known for measuring pressures. This principle is utilized in the **Tank-O-Meter** in a very simple manner to measure the contents of tanks. Pressure pipe (7) is inserted into the liquid as illustrated. By means of an air pump (2), air is forced into the pipe (7) through connection (B), while the pressure in pipe (7) is measured by the indicating column (9) through connection (A). As the pump (2) is actuated, the pressure in pipe (7) will obviously increase only until said pressure is equal to the head (h), after which any additional amount of air pumped into pipe (7) will merely bubble out through the opening at (13). The indicating column (9) will therefore continue to rise only to a point corresponding to the head (h), after which continued pumping will have no further effect on the reading. A check valve in the pump line prevents any dissipation of the pressure thus obtained. When compressed air is available, the pump may be entirely eliminated. A third connection (C) connects the space above the liquid in the tank with the top of the indicating column (9), thus avoiding the possibility of any errors, if, at any time, the tank is under pressure or vacuum. In other words, regardless of the pressure or vacuum existing in the space above the liquid in the tank, the **Tank-O-Meter** will measure the head (h) which can be calibrated in units of depth, volume, or weight.

GENERAL INSTALLATION METHOD

A three line cable containing connections (A), (B), and (C), can be furnished in any desired length with suitable end fittings. A tank fitting (4) is furnished with the **Tank-O-Meter** and is provided with a stuffing box and stuffing box nut (6), through which a $\frac{1}{2}$ " pressure pipe (7) extends. The tank fitting (4) is also provided with a $\frac{1}{2}$ " male pipe thread for screwing into a $\frac{1}{2}$ " coupling (28). The pressure fitting (25), which is also furnished with the **Tank-O-Meter** is provided with a $\frac{1}{2}$ " female pipe thread so that it can be screwed fast to the top of the $\frac{1}{2}$ " pressure pipe (7). The pressure pipe (7) may be made of a standard $\frac{1}{2}$ " pipe of the material best suited for the liquid involved. For very viscous liquids, pipe (7) may be made larger in diameter. It is generally recommended that the pressure pipe (7) be cut away at the bottom as illustrated by dimension (a). This eliminates any possible errors due to sludge in the bottom of the tank. The dimension (a) is generally two inches but may be made to suit the characteristics of the liquid involved. The starting point on the scale is determined by this dimension.

Tank fitting (4) and pressure fitting (25) can be furnished of steel, brass, aluminum, stainless steel, hard rubber, or any other material most suitable for the liquid involved.

ACTUATING MEANS

The air or gas for actuating the **Tank-O-Meter** may be supplied from any number of different sources. As already stated, the most generally used means for supplying air to the measuring system is a hand pump (2), Figure 17-A, which forms a part of the **Tank-O-Meter**. Only a few strokes of the pump are necessary to exhaust the pressure pipe (7), Figure 16, after which continued pumping will only cause air to bubble out at

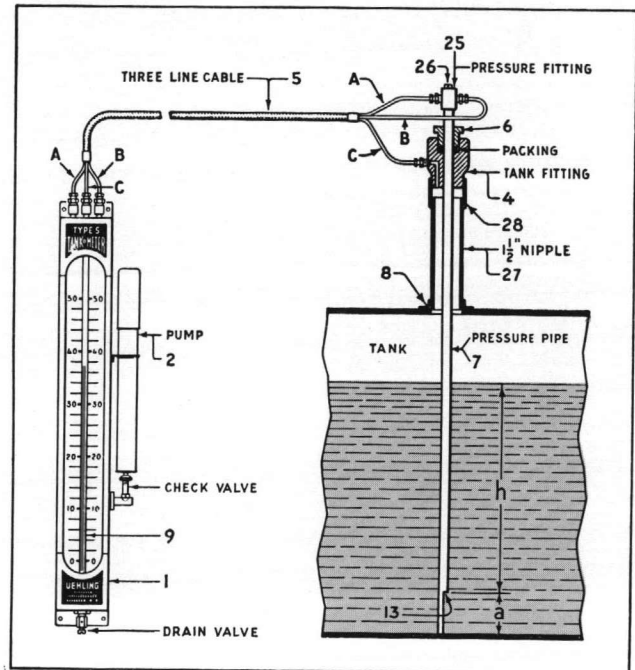


FIGURE 16

(13) without further affecting the reading as indicated by the manometer (9) of the **Tank-O-Meter**. A check valve as illustrated in Figure 16, maintains the reading thus obtained.

The **Tank-O-Meter** may also be actuated by compressed air. In such a case, the instrument is furnished with a bubbling chamber (3) and a needle valve (9), Figure 17-B. The compressed air supply line is connected through the needle valve which may be adjusted to cause a gentle bubbling visualized through the transparent vessel (3). The air thus supplied will exhaust the pressure pipe (7), Figure 16, and then continue to bubble out through (13), thereby causing the reading on the **Tank-O-Meter** to correspond to the head (h), Figure 16.

When the chemical properties of the liquid to be measured will not permit the use of air, any other more suitable gaseous medium may be substituted. In such a case, for example, the **Tank-O-Meter** may be actuated from a cylinder of inert gas, such as Nitrogen or Carbon Dioxide. This method is illustrated in Figure 17-C, in which a standard cylinder (7) is connected with the bubbling chamber (3) and needle valve (9) through a reducing valve (6). When the needle valve (9) is opened to cause the gentle bubbling in (3), the indicating fluid of the **Tank-O-Meter** will, in the manner previously stated, rise to the point corresponding to the level of the liquid in the tank. The indicating column will remain at this point even after the needle valve has been closed. It is, therefore, only necessary to open the needle valve until the maximum reading has been obtained. By this method of conserving gas, the cylinder (7) will be capable of supplying the required pressure for an indefinite period of time.

Any of the above actuating methods can be used in conjunction with a high or low level alarm as shown in Figure 17-D.

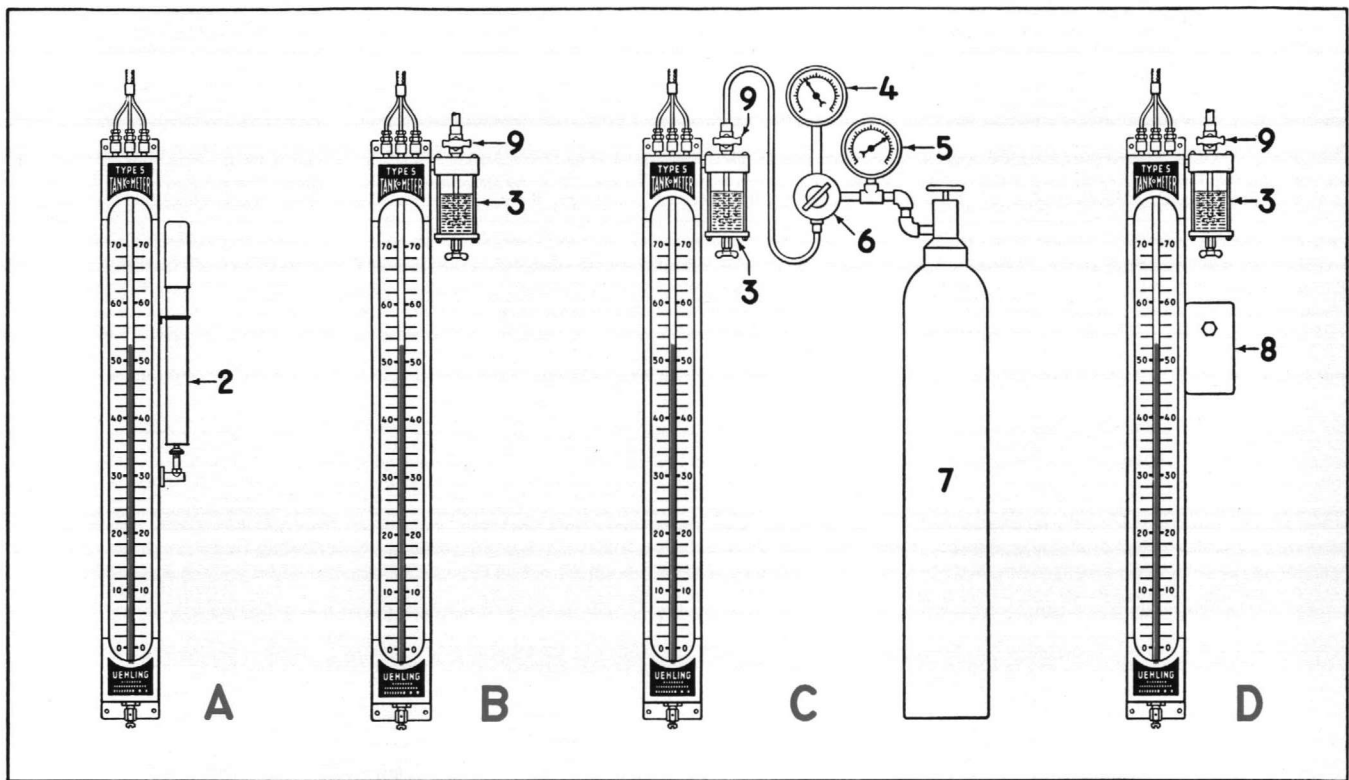


FIGURE 17—(A) Hand Pump Actuation, (B) Compressed Air Actuation, (C) Actuation by a Cylinder of Inert Gas, (D) Actuation by Compressed Air or Inert Gas with Switch for automatically opening or closing an electric circuit at any predetermined level.

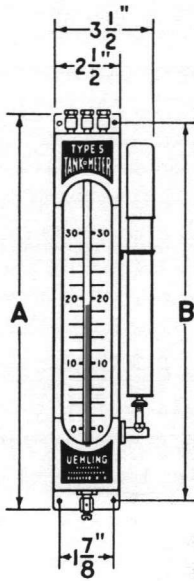
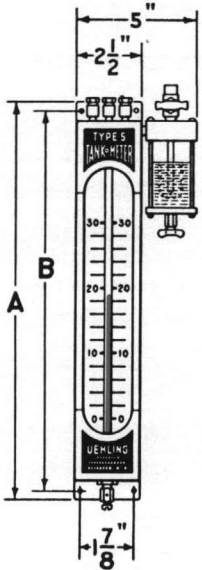
STANDARD MODELS AND CHARACTERISTICS*

Red Indicating Fluid No. 1			Red Indicating Fluid No. 3			Red Indicating Fluid No. 2			Mercury			Red Indicating Fluid No. 173		
I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
MODEL	Depth Inches Water	Approx. Scale Length in Inches	MODEL	Depth Inches Water	Approx. Scale Length in Inches	MODEL	Depth Inches Water	Approx. Scale Length in Inches	MODEL	Depth Inches Water	Approx. Scale Length in Inches	MODEL	Depth Inches Water	Approx. Scale Length in Inches
11R1	8.8	11	11R3	13.7	11	11R2	33	11	11MT	150	11	11R173	19.3	11
14R1	11.2	14	14R3	17.5	14	14R2	42	14	14MT	185	14	14R173	24.5	14
15R1	12.0	15	15R3	18.7	15	15R2	45	15	15MT	200	15	15R173	26	15
20R1	16.0	20	20R3	25.0	20	20R2	60	20	20MT	270	20	20R173	35	20
25R1	20.0	25	25R3	31.0	25	25R2	75	25	25MT	340	25	25R173	44	25
30R1	24.0	30	30R3	37.0	30	30R2	90	30	30MT	410	30	30R173	52	30
35R1	28.0	35	35R3	43.0	35	35R2	105	35	35MT	480	35	35R173	61	35
40R1	32.0	40	40R3	50.0	40	40R2	120	40	40MT	550	40	40R173	69	40
45R1	36.0	45	45R3	56.0	45	45R2	135	45	45MT	620	45	45R173	78	45
50R1	40.0	50	50R3	62.0	50	50R2	150	50	50MT	690	50	50R173	87	50
55R1	44.0	55	55R3	68.0	55	55R2	165	55	55MT	750	55	55R173	95	55
60R1	48.0	60	60R3	75.0	60	60R2	180	60	60MT	820	60	60R173	103	60
65R1	52.0	65	65R3	81.0	65	65R2	194	65	65MT	890	65	65R173	112	65
70R1	56.0	70	70R3	88.0	70	70R2	209	70	70MT	960	70	70R173	120	70
75R1	60.0	75	75R3	94.0	75	75R2	224	75	75MT	1020	75	75R173	129	75
80R1	64.0	80	80R3	101.0	80	80R2	239	80	80MT	1090	80	80R173	137	80
85R1	68.0	85	85R3	108.0	85	85R2	253	85	85MT	1160	85	85R173	146	85
90R1	72.0	90	90R3	114.0	90	90R2	268	90	90MT	1230	90	90R173	154	90
95R1	76.0	95	95R3	119.0	95	95R2	283	95	95MT	1290	95	95R173	163	95
100R1	80.0	100	100R3	125.0	100	100R2	298	100	100MT	1360	100	100R173	171	100

*To determine Model for any particular Tank multiply the maximum depth of tank in inches by the specific gravity of the Liquid. The smallest figure in Column II which is equal to or greater than the figure so obtained will determine the model of TANK-O-METER required.

FOR OVERALL DIMENSIONS SEE BACK COVER

OVERALL TANK-O-METER DIMENSIONS

	MODELS	Dimension A	Dimension B	
	11R1, 11R2, 11R3, 11MT, and 11R173	18 1/4 inches	17 1/2 inches	
	14R1, 14R2, 14R3, 14MT, and 14R173	21 "	20 1/4 "	
	15R1, 15R2, 15R3, 15MT, and 15R173	22 1/4 "	21 1/2 "	
	20R1, 20R2, 20R3, 20MT, and 20R173	27 1/4 "	26 1/2 "	
	25R1, 25R2, 25R3, 25MT, and 25R173	32 1/4 "	31 1/2 "	
	30R1, 30R2, 30R3, 30MT, and 30R173	37 1/4 "	36 1/2 "	
	35R1, 35R2, 35R3, 35MT, and 35R173	42 1/4 "	41 1/2 "	
	40R1, 40R2, 40R3, 40MT, and 40R173	47 1/4 "	46 1/2 "	
	45R1, 45R2, 45R3, 45MT, and 45R173	52 1/4 "	51 1/2 "	
	50R1, 50R2, 50R3, 50MT, and 50R173	57 1/4 "	56 1/2 "	
55R1, 55R2, 55R3, 55MT, and 55R173	62 1/4 "	61 1/2 "	<p>Compressed Air Actuated</p>	
60R1, 60R2, 60R3, 60MT, and 60R173	67 1/4 "	66 1/2 "		
65R1, 65R2, 65R3, 65MT, and 65R173	72 1/4 "	71 1/2 "		
70R1, 70R2, 70R3, 70MT, and 70R173	77 1/4 "	76 1/2 "		
75R1, 75R2, 75R3, 75MT, and 75R173	82 1/4 "	81 1/2 "		
80R1, 80R2, 80R3, 80MT, and 80R173	87 1/4 "	86 1/2 "		
85R1, 85R2, 85R3, 85MT, and 85R173	92 1/4 "	91 1/2 "		
90R1, 90R2, 90R3, 90MT, and 90R173	97 1/4 "	96 1/2 "		
95R1, 95R2, 95R3, 95MT, and 95R173	102 1/4 "	101 1/2 "		
100R1, 100R2, 100R3, 100MT, and 100R173	107 1/4 "	106 1/2 "		

OTHER UEHLING PRODUCTS

- Absolute Pressure Indicators
- Vacuum Indicators
- Pressure Indicators
- Combined Vacuum and Pressure Indicators
- Barometers (Mercurial Type)
- Draft Gauges
- Manometers for any purpose

UEHLING INSTRUMENT COMPANY

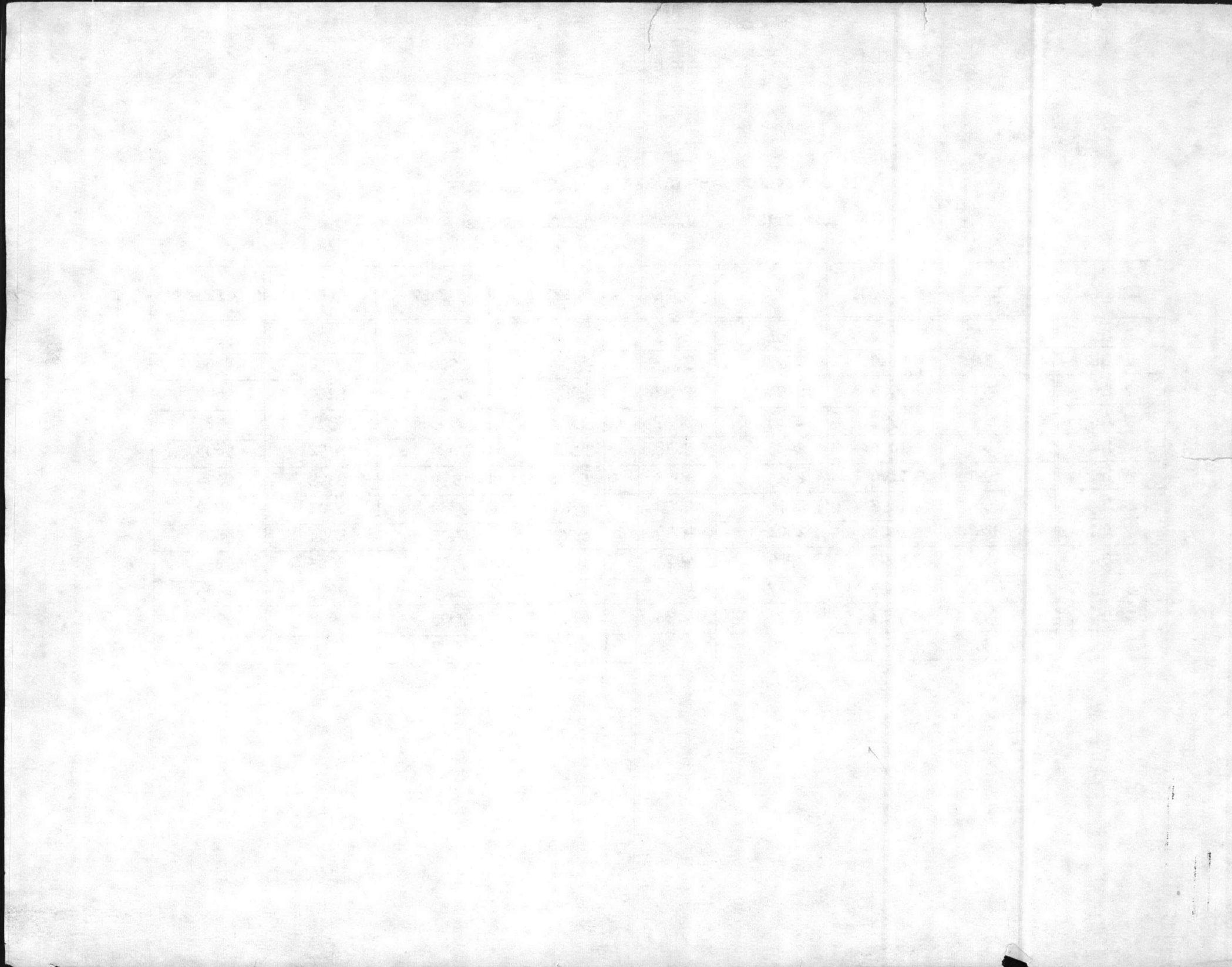
Telephone (201) 742-8710

PATERSON, NEW JERSEY 07509

10,000 GALLON - 8' DIAMETER CYLINDRICAL TANK

QUANTITIES IN GALLONS FOR VARIOUS DEPTHS

DEPTH	0 FEET	1 FOOT	2 FEET	3 FEET	4 FEET	5 FEET	6 FEET	7 FEET
0 In.	0	722	1961	3428	5000	6572	8039	9278
1 In.	21	810	2077	3557	5132	6700	8154	9364
2 In.	53	902	2195	3687	5265	6828	8269	9447
3 In.	95	997	2313	3817	5397	6953	8381	9527
4 In.	141	1095	2433	3948	5529	7076	8492	9603
5 In.	199	1196	2555	4078	5660	7199	8598	9674
6 In.	260	1298	2678	4209	5791	7322	8702	9740
7 In.	326	1402	2801	4340	5922	7445	8804	9801
8 In.	397	1508	2924	4471	6052	7567	8905	9859
9 In.	473	1619	3047	4603	6183	7687	9003	9905
10 In.	553	1713	3172	4735	6313	7805	9098	9947
11 In.	636	1846	3300	4868	6443	7923	9190	9979



(Kennedy) Personal

Table 17 - Contents of Horizontal Cylindrical Tanks with flat ends. Contents given in

Diam. of Tank, in.	Full Tank	3	6	9	12	15	18	21	24	27	30	33
12	5.88	1.15	2.94									
18	13.22	1.45	3.86	6.61								
24	23.50	1.70	4.60	8.05	11.75							
30	36.72	1.91	5.23	9.27	13.72	18.36						
36	52.88	2.12	5.79	10.34	15.43	20.85	26.44					
42	71.97	2.28	6.31	11.31	16.97	23.07	29.47	35.99				
48	94.01	2.45	6.78	12.20	18.38	25.10	32.20	39.54	47.00			
54	118.98	2.60	7.22	13.04	19.68	26.97	34.72	42.80	51.08	59.49		
60	146.89	2.75	7.64	13.82	20.91	28.72	37.06	45.82	54.87	64.11	73.44	
66	177.73	2.89	8.04	14.56	22.07	30.37	39.28	48.65	58.39	68.41	78.59	88.86
72	211.52	3.02	8.42	15.26	23.17	31.92	41.36	51.32	61.71	72.45	83.41	94.54
78	248.24	3.15	8.78	15.94	24.21	33.41	43.34	53.86	64.87	76.27	87.97	99.90
84	287.90	3.26	9.12	16.57	25.24	34.85	45.24	56.29	67.87	79.91	92.30	104.98
90	330.49	3.43	9.46	17.20	26.20	36.21	47.05	58.61	70.75	83.39	96.43	109.81
96	376.02	3.50	9.79	17.80	27.13	37.52	48.81	60.84	73.52	86.73	100.39	114.44
102	424.50	3.61	10.10	18.37	28.01	39.00	50.49	62.99	76.18	89.94	104.20	118.89
108	476.10	3.71	10.39	18.94	28.90	40.03	52.14	65.09	78.74	93.04	107.87	123.17
114	530.25	3.78	10.74	19.49	29.75	41.22	53.73	67.10	81.24	96.05	111.43	127.31
120	587.54	3.91	10.98	20.02	30.57	42.39	55.26	69.06	83.65	98.95	114.87	131.32
126	647.74	4.01	11.27	20.54	31.38	43.50	56.76	70.96	86.00	101.78	118.21	135.20
132	715.45	4.11	11.53	21.03	32.17	44.62	58.22	72.82	88.28	104.53	121.44	138.98
138	777.00	4.20	11.80	21.54	32.93	45.70	59.64	74.62	90.50	107.20	124.60	142.66
144	846.04	4.29	12.06	22.02	33.67	46.77	61.03	76.38	92.68	109.81	127.69	146.24

John
Poore

M

Mulholland

UNIVERSAL FUEL OIL TANK CHART

TANK CAPACITY

GALLONS.

SIZE OF TANK

OIL HEIGHT IN INCHES	275				550	1000	1001	1500	1500	2000	2500	3000
	Obround 26"	Obround 28"	Obround 42"	Obround 44"	48"	64"	48"	48"	64"	64"	64"	64"
1	6	3	2	2	3	3	5	7	5	6	7	10
2	14	8	6	5	8	9	14	21	14	18	22	27
3	23	15	10	9	14	16	26	39	26	32	38	51
4	33	23	15	14	22	26	40	60	39	53	63	78
5	43	32	21	20	31	37	55	83	54	74	89	108
6	54	42	27	26	40	47	72	108	71	94	115	142
7	65	53	33	32	50	58	90	136	89	116	143	178
8	77	63	40	38	61	72	109	164	108	144	176	217
9	89	74	47	45	73	84	130	195	129	169	207	257
10	100	86	54	52	85	98	151	227	150	197	244	303
11	113	98	61	59	97	114	172	259	172	228	283	344
12	125	110	69	66	110	129	196	294	195	259	321	390
13	137	122	77	73	123	145	219	329	219	290	361	437
14	149	135	85	80	136	161	243	364	243	323	401	486
15	161	148	92	87	150	178	267	401	268	357	443	537
16	174	160	100	94	164	195	292	428	294	391	486	588
17	185	172	108	101	178	212	317	476	320	425	529	640
18	197	184	115	108	193	230	343	515	347	460	573	694
19	209	196	123	115	207	248	368	553	373	497	617	748
20	221	207	131	122	222	266	395	593	401	532	662	803
21	231	217	138	129	237	285	421	632	429	570	708	858
22	241	228	145	137	252	302	447	672	458	605	753	915
23	251	238	153	146	267	320	474	712	478	641	799	972
24	260	246	161	153	282	339	501	752	515	679	847	1030
25	268	255	168	160	297	360	528	792	544	720	897	1088
26	275	264	176	167	312	379	565	832	573	759	945	1147
27		270	184	174	327	399	581	872	603	798	995	1206
28		275	191	181	348	419	607	910	633	839	1045	1265
29			199	188	356	438	635	950	662	877	1095	1325
30			207	195	371	459	659	988	692	918	1147	1384
31			215	202	386	478	685	1027	722	953	1197	1444
32			222	209	400	500	710	1102	752	1000	1250	1504
33			229	216	414	521	735	1138	782	1043	1302	1564
34			236	223	427	541	759	1168	812	1083	1353	1624
35			243	230	441	561	783	1201	841	1123	1404	1683
36			249	237	454	582	806	1225	861	1164	1456	1743
37			255	243	467	603	830	1244	901	1206	1507	1802
38			261	249	479	620	851	1276	930	1241	1554	1861
39			266	255	491	640	872	1308	960	1281	1603	1920
40			270	261	502	660	893	1339	989	1321	1652	1978
41			274	266	514	679	912	1368	1026	1359	1700	2036
42			276	270	524	697	930	1395	1046	1395	1746	2093
43				273	533	715	947	1410	1074	1431	1792	2150
44				275	542	734	962	1444	1102	1469	1838	2205
45					549	752	976	1464	1131	1505	1883	2260
46					556	770	988	1482	1157	1541	1927	2314
47					561	787	997	1496	1184	1575	1970	2368
48					564	804	1002	1504	1210	1609	2013	2420
49						821			1235	1643	2056	2471
50						838			1260	1677	2098	2525
51						855			1285	1710	2139	2571
52						870			1309	1741	2178	2618
53						886			1332	1772	2217	2664
54						901			1354	1803	2255	2705
55						915			1375	1831	2292	2751
56						928			1395	1856	2324	2791
57						942			1415	1884	2357	2830
58						953			1423	1906	2385	2866
59						963			1449	1926	2411	2900
60						974			1465	1948	2437	2930
61						984			1478	1968	2462	2957
62						991			1490	1982	2478	2981
63						997			1499	1994	2493	2998
64						1000			1504	2000	2500	3008

NOTE: This table applies to tanks made by one particular manufacturer and will vary slightly from measurements for tanks made by other manufacturers. For practical purposes, however, since difference in readings are taken before and after delivery these figures can be used with a fair degree of accuracy for all makes of tanks.

FOR SERVICE CALL





BOILER PLANT FUEL OIL STORAGE TANKS

<u>Sounding Feet</u>	<u>Gallons</u>	<u>Sounding Feet</u>	<u>Gallons</u>
1'	23794.6	10'	11897.4
1' 6"	23133.6	10' 6"	11236.4
2'	22472.7	11'	10575.4
2' 6"	21811.7	11' 6"	9914.4
3'	21150.8	12'	9253.5
3' 6"	20489.8	12' 6"	8592.5
4'	19828.9	13'	7931.6
4' 6"	19167.9	13' 6"	7270.6
5'	18507.0	14'	6609.7
5' 6"	17846.0	14' 6"	5948.7
6'	17185.0	15'	5287.8
6' 6"	16524.0	15' 6"	4626.8
7'	15863.1	16'	3965.8
7' 6"	15202.1	16' 6"	3304.8
8'	14541.2	17'	2643.9
8' 6"	13880.2	17' 6"	1982.9
9'	13219.3	18'	1322.0
9' 6"	12558.3	18' 6"	661.0

Add or subtract 110.2 gals/inch
Measure from top of hand hole flange

WATER PLANT TANK OIL STORAGE TANKS

<u>Gal/ons</u>	<u>ounding Feet</u>	<u>Gal/ons</u>	<u>ounding Feet</u>
1137.4	10'	2374.6	1'
1136.4	10' 6"	2333.6	1' 6"
1052.4	11'	2242.7	2'
921.4	11' 6"	2151.7	2' 6"
852.2	12'	2110.8	3'
822.2	12' 6"	2042.3	3' 6"
737.8	13'	1982.2	4'
650.8	13' 6"	1917.2	4' 6"
600.7	14'	1850.0	5'
548.8	14' 6"	1784.0	5' 6"
527.8	15'	1718.0	6'
452.8	15' 6"	1652.0	6' 6"
382.8	16'	1583.1	7'
330.8	16' 6"	1520.1	7' 6"
267.2	17'	1451.2	8'
198.2	17' 6"	1380.2	8' 6"
132.0	18'	1312.3	9'
61.0	18' 6"	1252.3	9' 6"

Add or subtract 110.2 Gal./inch
Measure from top of hand hole flange

	TANK CAP. GAL:	GALS. ON HAND
Bldg. No. 833 -	10,390	9,596
Bldg. No. 701 -	6,408	3,851
Bldg. No. 703 -	6,408	5,746
Bldg. No. 710 -	6,785	5,863
Bldg. No. 820 -	480	122

7-28-61



Bldg. No: 833

GAL:
CAP: 10,390

Bldg. No: 701

" 6,408

Bldg. No: 703

" 6,408

Bldg. No: 710

" 6,785

Bldg. No: 820

" 480

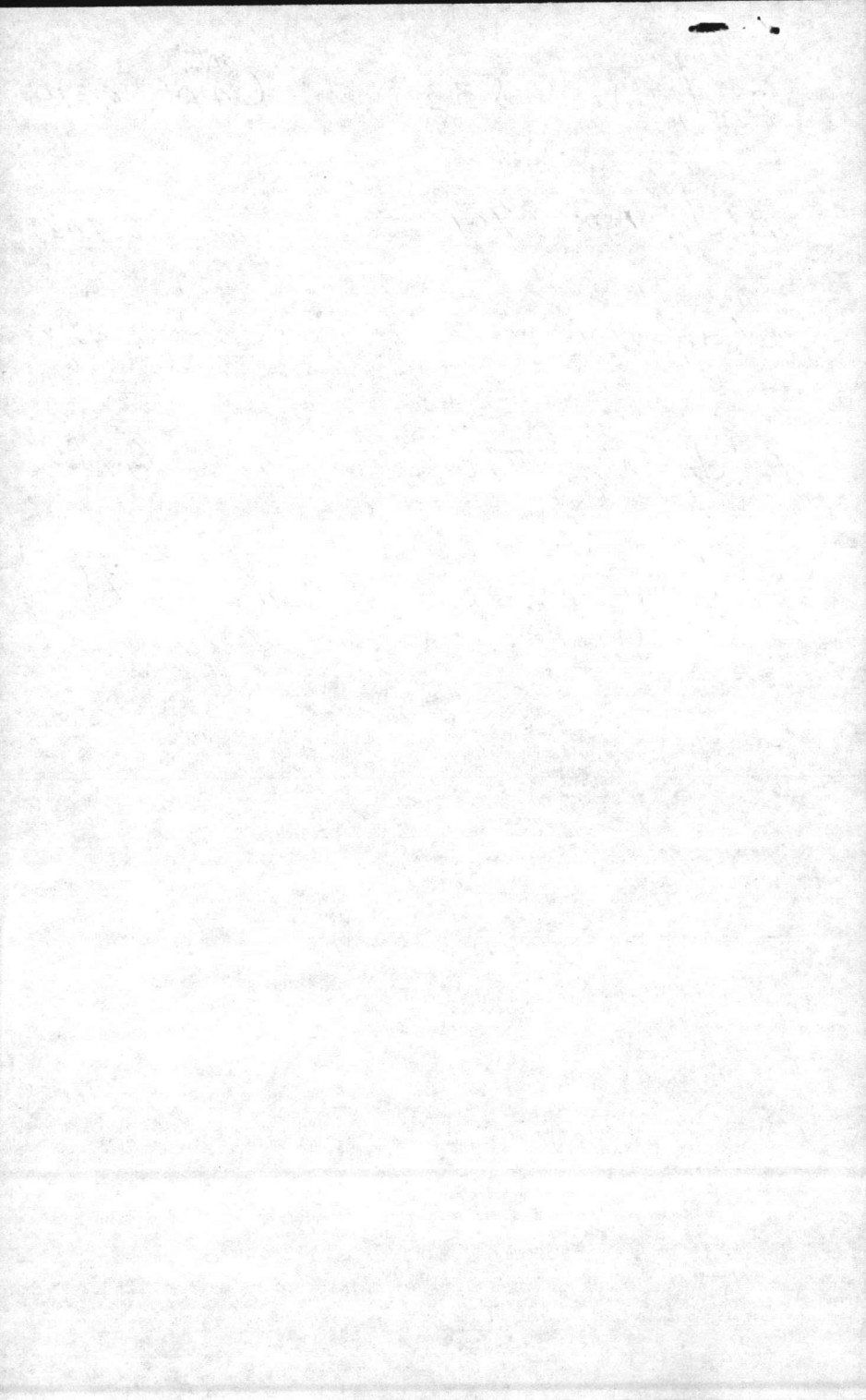


TABLE XV-16
 QUANTITIES FOR VARIOUS DEPTHS OF
 CYLINDRICAL TANKS IN HORIZONTAL POSITION

% DEPTH FILLED	% OF CAPAC- ITY	% DEPTH FILLED	% OF CAPAC- ITY	% DEPTH FILLED	% OF CAPAC- ITY	% DEPTH FILLED	% OF CAPAC- ITY
1	0.20	26	20.73	51	51.27	76	81.50
2	0.50	27	21.86	52	52.55	77	82.60
3	0.90	28	23.00	53	53.81	78	83.68
4	1.34	29	24.07	54	55.08	79	84.74
5	1.87	30	25.31	55	56.34	80	85.77
6	2.45	31	26.48	56	57.60	81	86.77
7	3.07	32	27.66	57	58.86	82	87.76
8	3.74	33	28.84	58	60.11	83	88.73
9	4.45	34	30.03	59	61.36	84	89.68
10	5.20	35	31.19	60	62.61	85	90.60
11	5.98	36	32.44	61	63.86	86	91.50
12	6.80	37	33.66	62	65.10	87	92.36
13	7.64	38	34.90	63	66.34	88	93.20
14	8.50	39	36.14	64	67.56	89	94.02
15	9.40	40	37.39	65	68.81	90	94.80
16	10.32	41	38.64	66	69.97	91	95.55
17	11.27	42	39.89	67	71.16	92	96.26
18	12.24	43	41.14	68	72.34	93	96.93
19	13.23	44	42.40	69	73.52	94	97.55
20	14.23	45	43.66	70	74.69	95	98.13
21	15.26	46	44.92	71	75.93	96	98.66
22	16.32	47	46.19	72	77.00	97	99.10
23	17.40	48	47.45	73	78.14	98	99.50
24	18.50	49	48.73	74	79.27	99	99.80
25	19.61	50	50.00	75	80.39		

Tanks When Filled to Various Depths
 U. S. gallons per 1 foot of length

Depth of Liquid, h, inches

36 39 42 45 48 51 54 57 60 63 66 69 72

105.76													
111.97	124.13												
117.85	130.87	143.95											
123.45	137.28	151.23	165.25										
128.79	143.40	158.17	173.06	188.01									
133.92	149.25	164.81	180.53	196.37	212.25								
138.87	154.89	171.19	187.71	204.37	221.14	238.05							
143.63	160.33	177.33	194.60	212.05	229.65	247.37	265.13						
148.25	165.58	183.27	201.24	219.46	237.87	256.43	275.08	293.77					
152.71	170.66	189.00	207.67	226.61	245.79	265.16	284.65	304.24	323.87				
157.06	175.61	194.58	213.91	233.56	253.48	273.61	293.93	314.36	334.88	355.45			
161.28	180.42	200.00	219.98	240.31	260.94	281.81	302.90	324.15	345.54	367.00	388.50		
165.40	185.11	205.27	225.88	246.88	268.18	289.78	311.62	333.67	355.87	378.18	400.59	423.02	

"Stanley"

Blake

Blake

Blake

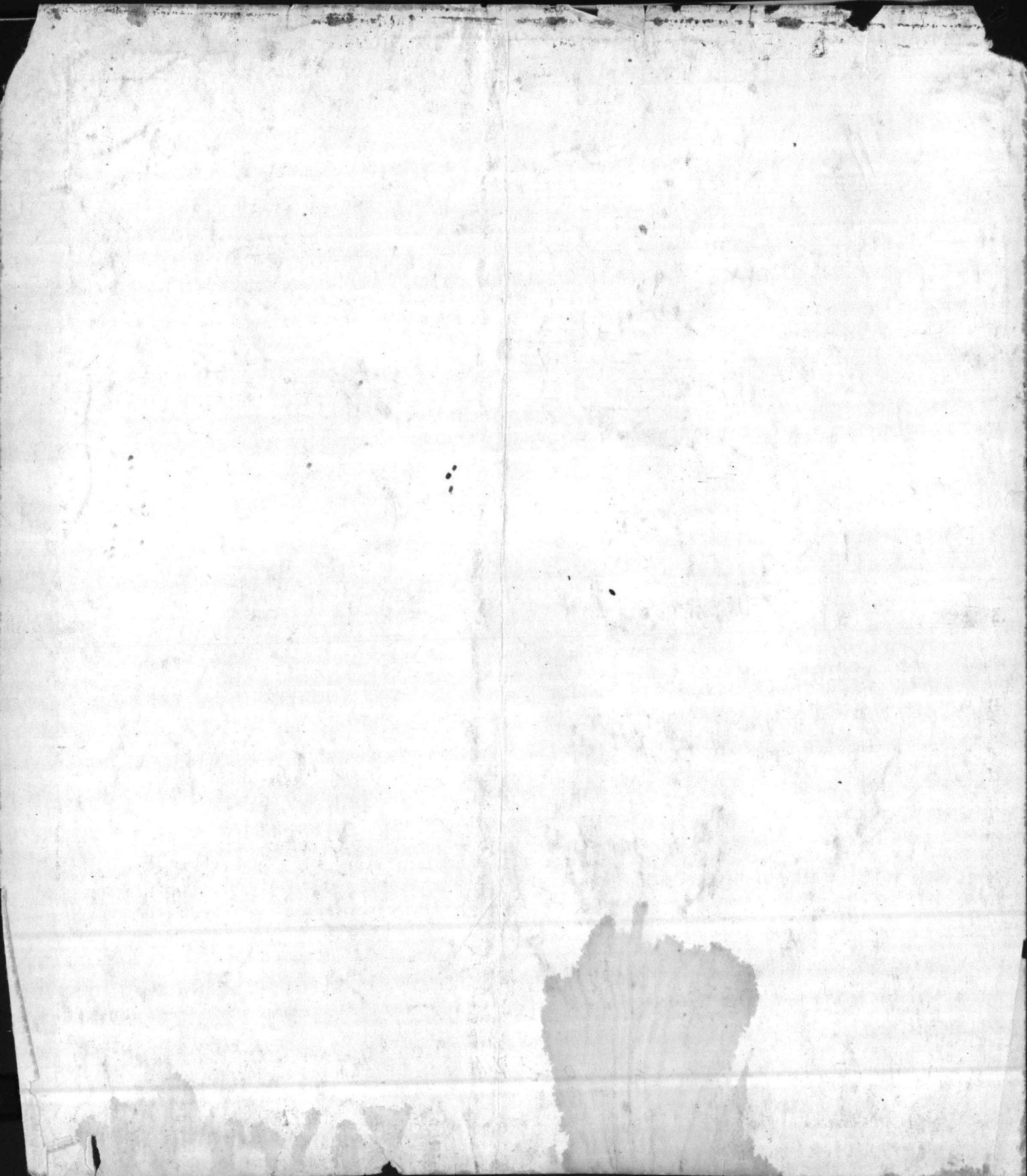
Blake

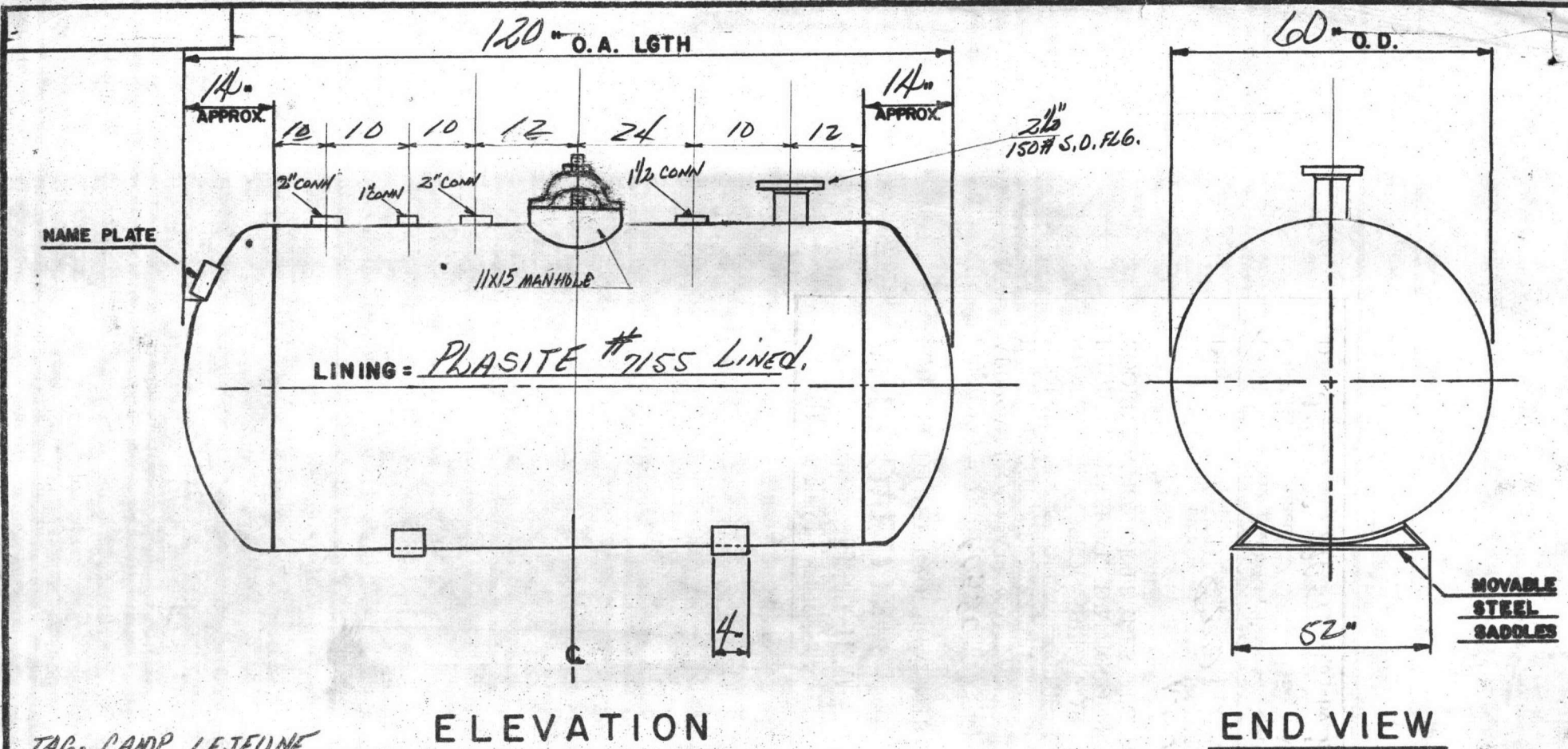
Blaw

BOILER PLANT FUEL OIL STORAGE TANKS

<u>Sounding Feet</u>	<u>Gallons</u>	<u>Sounding Feet</u>	<u>Gallons</u>
1'	23794.6	10'	11897.4
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4'	19828.9	13'	7931.6
4' 6"	19167.9	13' 6"	7270.6
5'	18507.0	14'	6609.7
5' 6"	17846.0	14' 6"	5948.7
6'	17185.0	15'	5287.8
6' 6"	16524.0	15' 6"	4626.8
7'	15863.1	16'	3965.8
7' 6"	15202.1	16' 6"	3304.8
8'	14541.2	17'	2643.8
8' 6"	13880.2	17' 6"	1982.9
9'	13219.3	18'	1322.0
9' 6"	12558.3	18' 6"	661.0

Add or subtract 110.2 gals/inch
Measure from top of hand hole flange





TAG - CAMP LEJEUNE

ELEVATION

END VIEW

SPECIFICATIONS: NO UNITS REQ'D. ONE (1)

- TANK
- 1. DESIGN WORKING PRESSURE 30 P.S.I., TEST PRESSURE 45 P.S.I.
 - 2. CONSTRUCTION FUSION WELDED AS PER 1962 A.S.M.E. CODE AND SO STAMPED
 - 3. MATERIAL: A212-B FDS.
 - 4. PAINT ALUMINUM (OUTSIDE ONLY)
 - 5. CAPACITY = 1358 GALS., MAX. DESIGN TEMP = 250 °F
 - 6. APPROX. WT. 2565 LBS.

ARCH. _____ ENG. _____

JOB: _____
 CUST: BOILER BRICK & REF. Co. P.O. NO. 1388
 AGENT: _____ P.O. NO. _____

STORAGE TANK
 ODIS P-60-120-H

Soft water tank

SCALE NONE	DATE 9/29/65	DRAWN SCK	CHECKED	APPROVED	ISSUED
---------------	-----------------	--------------	---------	----------	--------

Old Dominion Iron & Steel Corp.
 Belle Isle, Richmond 3, Virginia
 Draw No. M-65-923-B

NO.	DATE	BY	DESCRIPTN
REVISIONS			

ATLANTIC DIVISION, BUREAU OF YARDS AND DOCKS
NORFOLK 11, VA.

APPROVED "AS NOTED"

SUBJECT TO THE REQUIREMENTS OF

CONTRACT NBy 60580 SPEC 60580/65
APPROVAL OF MATERIALS AND/OR EQUIPMENT
INDICATES COMPLIANCE WITH SPECIFICATION
REQUIREMENTS ONLY — THE CONTRACTOR
SHALL BE RESPONSIBLE FOR PROVIDING
PROPER PHYSICAL DIMENSIONS & WEIGHTS,
COORDINATION OF TRADES, ETC., AS REQUIRED.

Date 13 JUL 1965

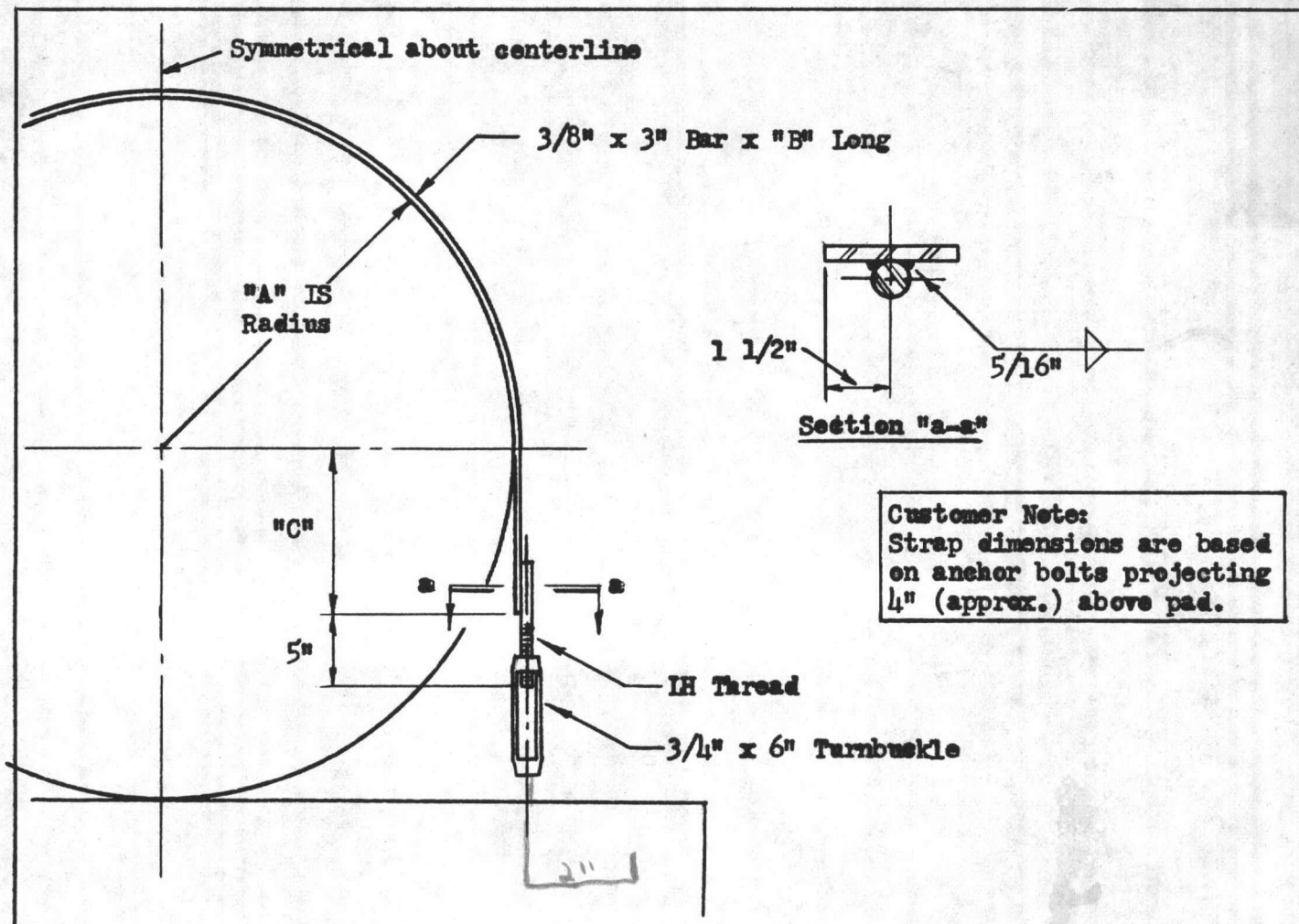
Dmd

N.J. DRUSTRUP
RADM, CEC, USN
DIRLANTDOCKS

FENNER AND PROFFITT
Consulting Engineers

P. O. Box 1260
Wilson, N. C.

Date JULY 8, 1965 Checked by W.F.F.

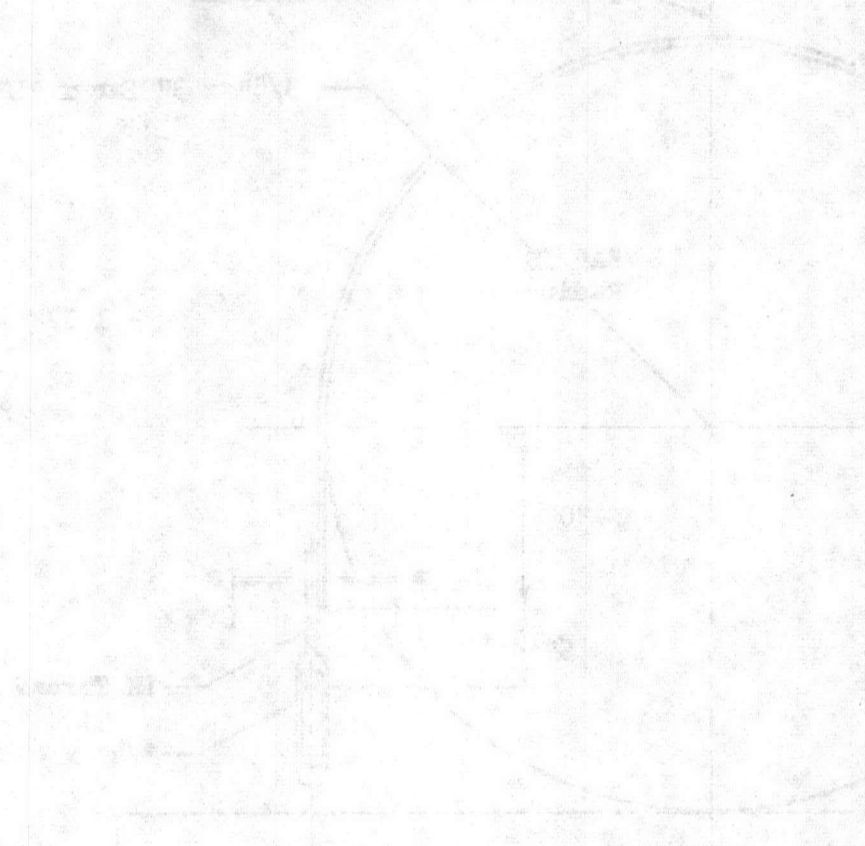


Strap No.	Tank Diameter	"A"	"B"	"C"	Weight Each
S 21 A	48"	24 1/4"	8'-3"	11 1/4"	38 lbs.
S 21 B	49 1/2"	25"	8'-7 1/8"	12"	39
S 21 C	64"	32 1/4"	11'-8 3/8"	19 1/4"	51
S 21 D	65"	32 3/4"	11'-11"	19 3/4"	52
S 21 E	72"	36 1/4"	13'-5"	23 1/4"	58
S 21 F	84"	42 3/8"	16'-0 1/2"	29 3/8"	68
S 21 G	96"	48 3/8"	18'-7 3/8"	35 3/8"	78
S 21 H	120"	60 3/8"	23'-9"	47 3/8"	98
S 21 J	126"	63 1/2"	25'-0 1/8"	50 1/2"	103

BUFFALO TANK DIVISION			
BETHLEHEM STEEL COMPANY			
STANDARD HOLD DOWN STRAP w/TURNUCKLES			
NO.	REVISION	BY	DATE
DATE 1-9-60		CUST. ORDER	
DRAWN		CONTRACT	
CHECKED		DRAWING S-33	



The first part of the report
 deals with the general
 principles of the design
 and construction of the
 dam.



Year	Month	Day	Time	Location	Remarks
1950	Jan	15	10:00	Site A	Initial survey
1950	Feb	20	14:30	Site B	Foundation study
1950	Mar	10	09:00	Site C	Material testing
1950	Apr	25	11:00	Site D	Construction start
1950	May	15	13:00	Site E	Water level rise
1950	Jun	30	16:00	Site F	Structural inspection
1950	Jul	10	08:00	Site G	Weathering study
1950	Aug	25	12:00	Site H	Final report

NATIONAL BUREAU OF STANDARDS
 BUREAU OF RESEARCH

REPORT OF THE CONFERENCE
 ON THE DESIGN AND CONSTRUCTION OF DAMS
 AND OTHER STRUCTURES

2583

Gauge Chart

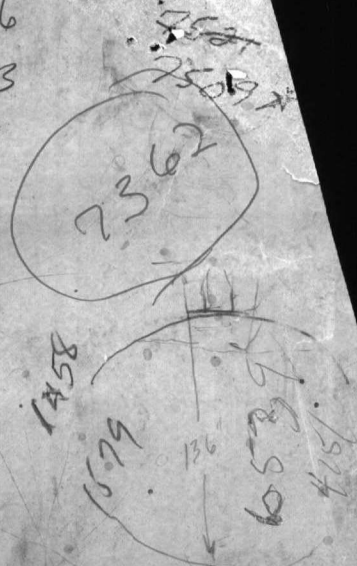
#17186

126" Diameter x 48'8" Long
30,000 Gallon Capacity

#2 21043

5474

192
1674
5794
755
93580-SD1
93576-AR



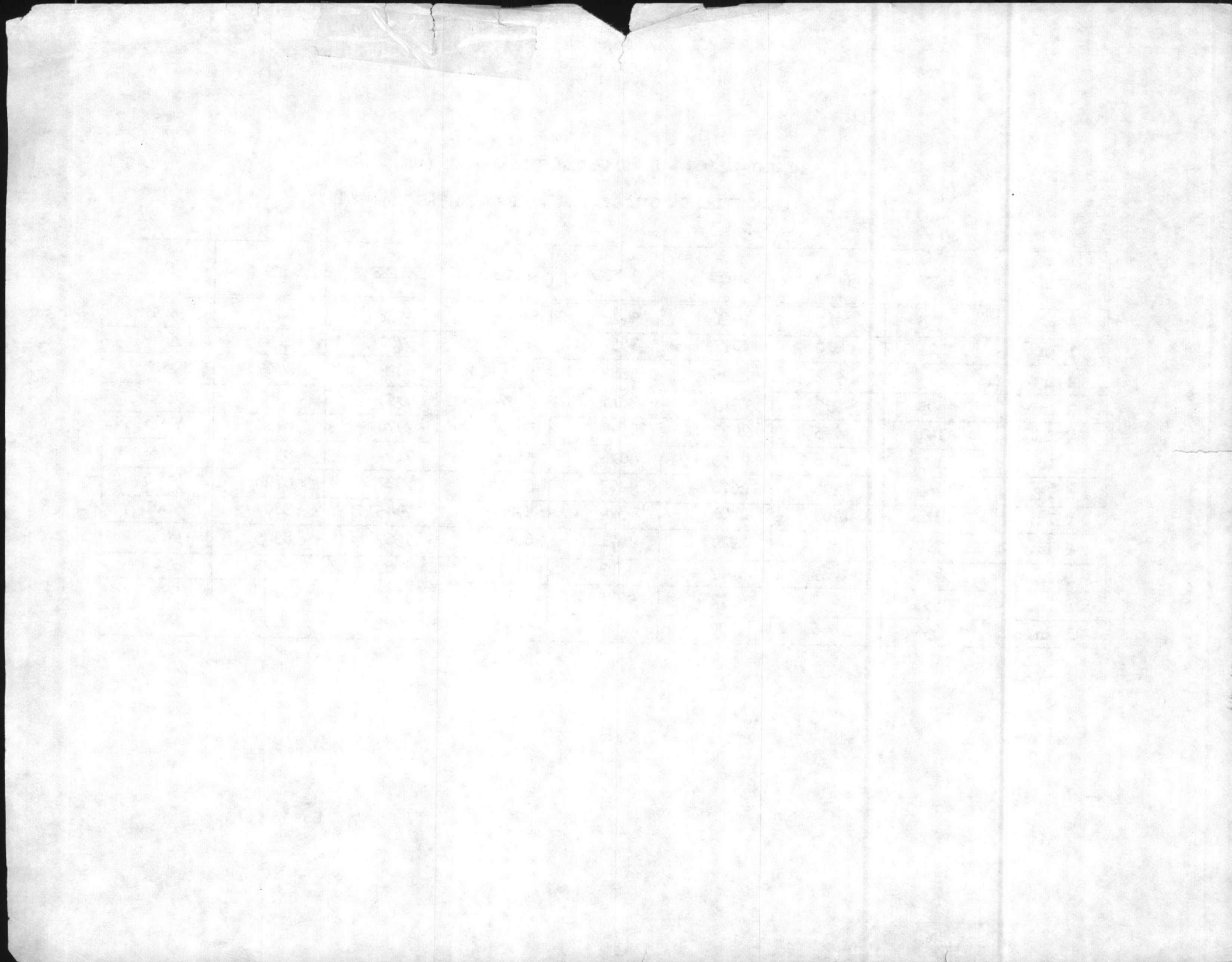
Inches	Gallons	Inches	Gallons	Inches	Gallons
46	9949	91	23293		
47	10243	92	23587		
48	10538	93	23881		
49	10834	94	24175		
50	11132	95	24469		
51	11430	96	24763		
52	11728	97	25057		
53	12026	98	25351		
54	12324	99	25645		
55	12622	100	25939		
56	12920	101	26233		
57	13218	102	26527		
58	13516	103	26821		
59	13814	104	27115		
60	14112	105	27409		
61	14410	106	27703		
62	14708	107	28000		
63	15006	108	28294		
64	15304	109	28588		
65	15602	110	28882		
66	15900	111	29176		
67	16198	112	29470		
68	16496	113	29764		
69	16794	114	30058		
70	17092	115	30352		
71	17390	116	30646		
72	17688	117	30940		
73	17986	118	31234		
74	18284	119	31528		
75	18582	120	31822		
76	18880	121	32116		
77	19178	122	32410		
78	19476	123	32704		
79	19774	124	33000		
80	20072	125	33294		
81	20370	126	33588		
82	20668				
83	20966				
84	21264				
85	21562				
86	21860				
87	22158				
88	22456				
89	22754				
90	23052				



10,000 GALLON - 8' DIAMETER CYLINDRICAL TANK

QUANTITIES IN GALLONS FOR VARIOUS DEPTHS

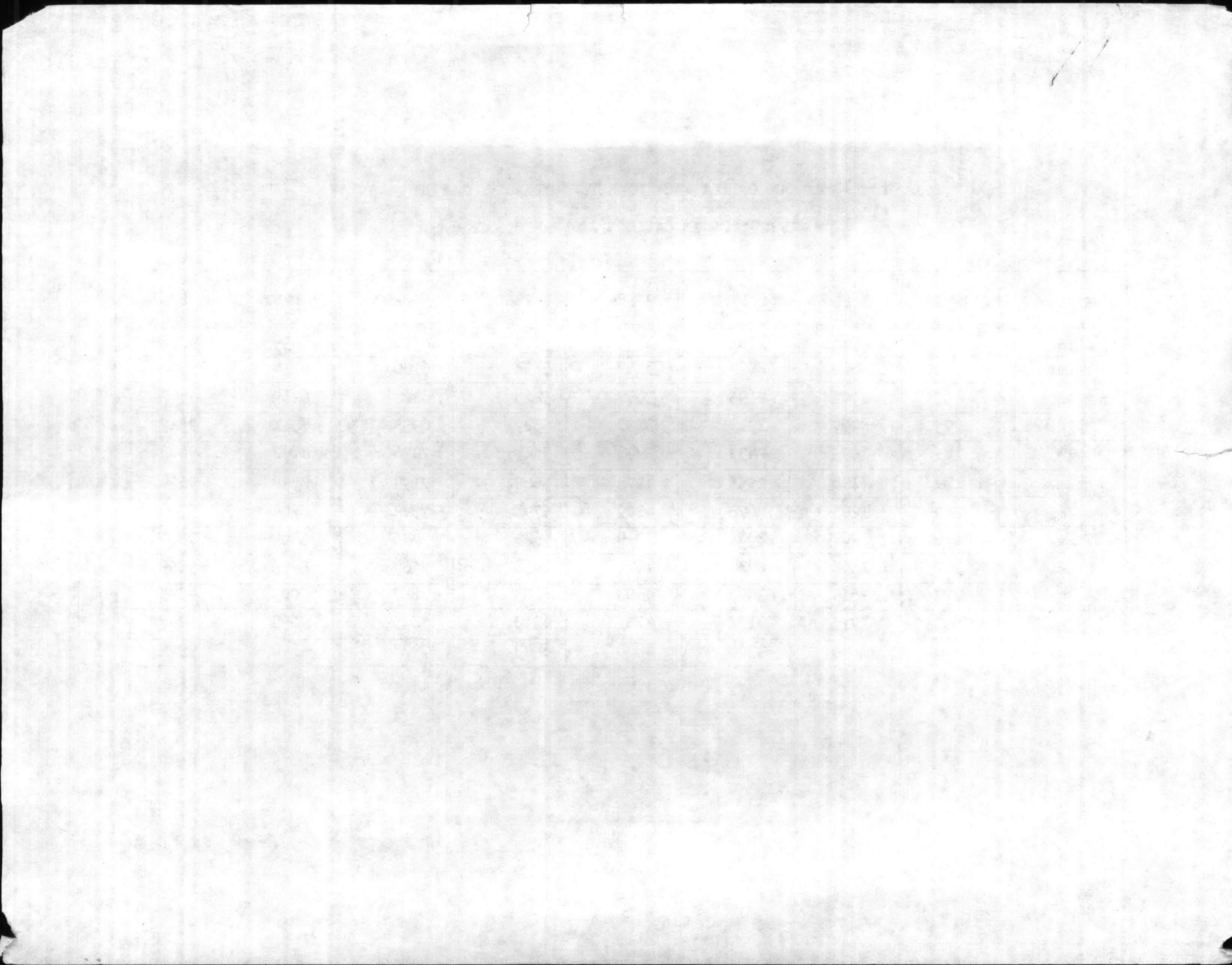
DEPTH	0 FEET	1 FOOT	2 FEET	3 FEET	4 FEET	5 FEET	6 FEET	7 FEET
0 In.	0	722	1961	3428	5000	6572	8039	9278
1 In.	21	810	2077	3557	5132	6700	8154	9364
2 In.	53	902	2195	3687	5265	6828	8269	9447
3 In.	95	997	2313	3817	5397	6953	8381	9527
4 In.	141	1095	2433	3948	5529	7076	8492	9603
5 In.	199	1196	2555	4078	5660	7199	8598	9674
6 In.	260	1298	2678	4209	5791	7322	8702	9740
7 In.	326	1402	2801	4340	5922	7445	8804	9801
8 In.	397	1508	2924	4471	6052	7567	8905	9859
9 In.	473	1619	3047	4603	6183	7687	9003	9905
10 In.	553	1713	3172	4735	6313	7805	9098	9947
11 In.	636	1846	3300	4868	6443	7923	9190	9979



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11 In.	636	1846	3300	4868	6443	7923	9190	9979



2,000 Gallon Tank - 5' dia., 12'8" lgth.

Inches		Gallons
3	-	35
6	-	97
9	-	175
12	-	265
15	-	364
18	-	470
21	-	580
24	-	695
27	-	812
30	-	930
33	-	1,048
36	-	1,165
39	-	1,280
42	-	1,390
45	-	1,496
48	-	1,596
51	-	1,686
54	-	1,763
57	-	1,825
60	-	1,860

5,000 Gallon Tank - R. 913. 15187 Tank.

Inches

Gallons

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

North American Ref.
Cleveland
Ohio
AR3A

GARY STEEL PRODUCTS CORPORATION

EXECUTIVE OFFICES
25TH ST. NEAR HAMPTON BLVD.
NORFOLK 1, VA.
PHONE 47786



PLANTS AT
NORFOLK, VIRGINIA
AND
ASHLAND, KENTUCKY

GAUGE STICK CHART

1000 GALLON TANK

64" DIA. x 73" LONG

<u>DEPTH OF LIQUID</u>	<u>CONTENTS IN GALLONS</u>	<u>DEPTH OF LIQUID</u>	<u>CONTENTS IN GALLONS</u>
1	4	33	529
2	9	34	548
3	17	35	569
4	27	36	590
5	37	37	613
6	48	38	629
7	60	39	648
8	73	40	668
9	86	41	687
10	102	42	706
11	116	43	725
12	132	44	745
13	148 ✓	45	763
14	165	46	781
15	181	47	799
16	198	48	817
17	217	49	835
18	234	50	851
19	253	51	868
20	271	52	883
21	290	53	899
22	310	54	914
23	328	55	929
24	348	56	942
25	368	57	955
26	387	58	967
27	408	59	979
28	426	60	989
29	448	61	998
30	468	62	1006
31	488	63	1012
32	508	64	1016

GARY STEEL PRODUCTS CORPORATION

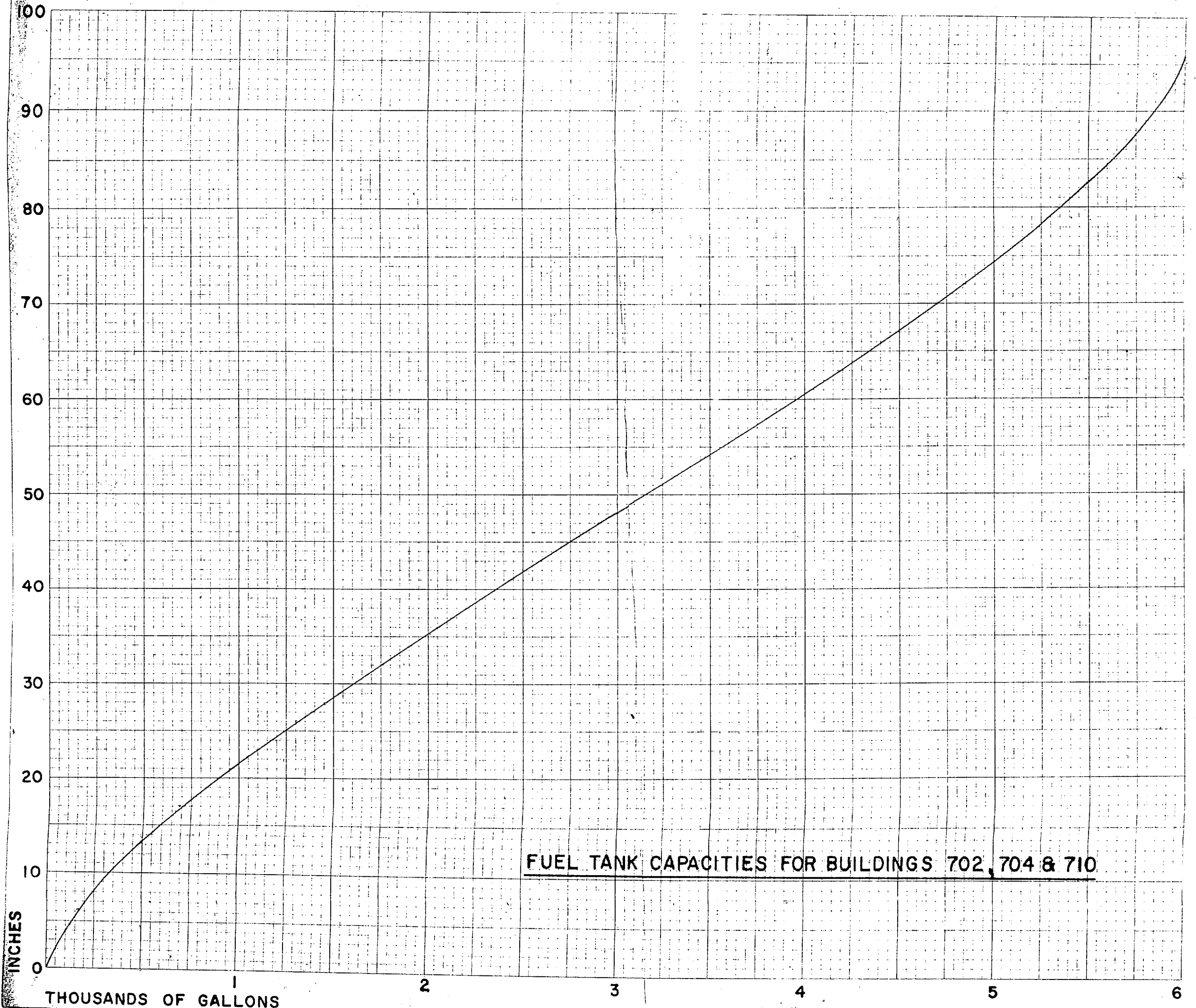
PLANTS AT
NORFOLK, VIRGINIA
AND
ASHLAND, KENTUCKY



EXECUTIVE OFFICES
2870 ST. NE. WASHINGTON BLVD.
NORFOLK, VA.
PHONE 47-80



100-108941-1000



FUEL TANK CAPACITIES FOR BUILDINGS 702, 704 & 710

INDEX

9

8

7

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8

THE INDEX TO THE RECORDS OF THE

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Capacity of fuel oil tank at Midway Park Food Center
 Tank size 54", Dia. 18' length.

INCHES	GALLONS	INCHES	GALLONS
1	15.6	41	1733.5
2	31.2	42	1777.1
3	46.8	43	1817.1
4	74.5	44	1857.1
5	102.2	45	1897.1
6	129.9	46	1932.3
7	164.8	47	1967.6
8	199.7	48	2002.9
9	234.7	49	2037.8
10	274.6	50	2072.7
11	315.3	51	2107.7
12	354.2	52	2134.7
13	397.2	53	2161.8
14	440.9	54	2190.8
15	485.4		
16	531.9		
17	578.4		
18	624.9		
19	673.4		
20	721.9		
21	770.4		
22	819.4		
23	868.4		
24	919.4		
25	969.8		
26	1019.9		
27	1070.8		
28	1121.2		
29	1171.7		
30	1222.2		
31	1268.7		
32	1315.2		
33	1361.7		
34	1410.1		
35	1458.5		
36	1506.9		
37	1553.4		
38	1599.9		
39	1646.4		
40	1689.9		

FULL TANK

Capacity of fuel oil tank at [unclear] [unclear]
 Tank size [unclear] [unclear]

INCHES	GALLONS	INCHES	GALLONS
1	1.0	1	1.0
2	2.0	2	2.0
3	3.0	3	3.0
4	4.0	4	4.0
5	5.0	5	5.0
6	6.0	6	6.0
7	7.0	7	7.0
8	8.0	8	8.0
9	9.0	9	9.0
10	10.0	10	10.0
11	11.0	11	11.0
12	12.0	12	12.0
13	13.0	13	13.0
14	14.0	14	14.0
15	15.0	15	15.0
16	16.0	16	16.0
17	17.0	17	17.0
18	18.0	18	18.0
19	19.0	19	19.0
20	20.0	20	20.0
21	21.0	21	21.0
22	22.0	22	22.0
23	23.0	23	23.0
24	24.0	24	24.0
25	25.0	25	25.0
26	26.0	26	26.0
27	27.0	27	27.0
28	28.0	28	28.0
29	29.0	29	29.0
30	30.0	30	30.0
31	31.0	31	31.0
32	32.0	32	32.0
33	33.0	33	33.0
34	34.0	34	34.0
35	35.0	35	35.0
36	36.0	36	36.0
37	37.0	37	37.0
38	38.0	38	38.0
39	39.0	39	39.0
40	40.0	40	40.0

WATER LEFT

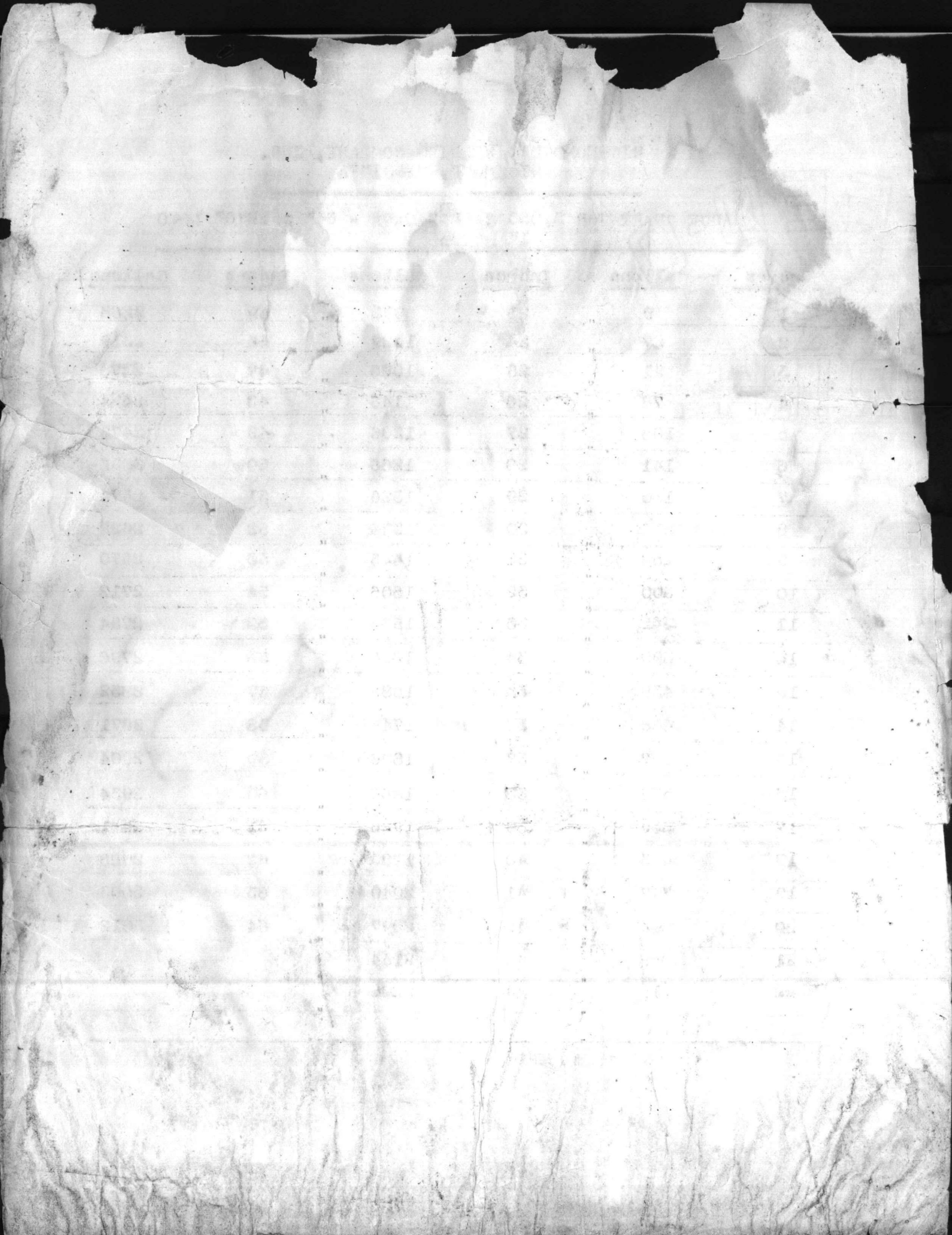
RICHMOND ENGINEERING COMPANY, INC.
RICHMOND, VIRGINIA

Midway School
Camp School
Food Center

A-1
BB-26

GAUGE CHART FOR 3,000 GALLON TANK - 64" x 18'0" LONG
1" STEPS

<u>Inches</u>	<u>Gallons</u>	<u>Inches</u>	<u>Gallons</u>	<u>Inches</u>	<u>Gallons</u>
1	9	23	972	45	2265
2	27	24	1029	46	2319
3	51	25	1086	47	2373
4	78	26	1146	48	2424
5	108	27	1206	49	2475
6	141	28	1266	50	2556
7	180	29	1326	51	2574
8	216	30	1386	52	2622
9	258	31	1446	53	2670
10	300	32	1506	54	2712
11	342	33	1566	55	2754
12	390	34	1626	56	2796
13	438	35	1686	57	2832
14	486	36	1746	58	2871
15	537	37	1806	59	2904
16	588	38	1866	60	2934
17	639	39	1926	61	2961
18	693	40	1983	62	2985
19	747	41	2040	63	3003
20	804	42	2097	64	3012
21	858	43	2154		
22	915	44	2208		



New High School

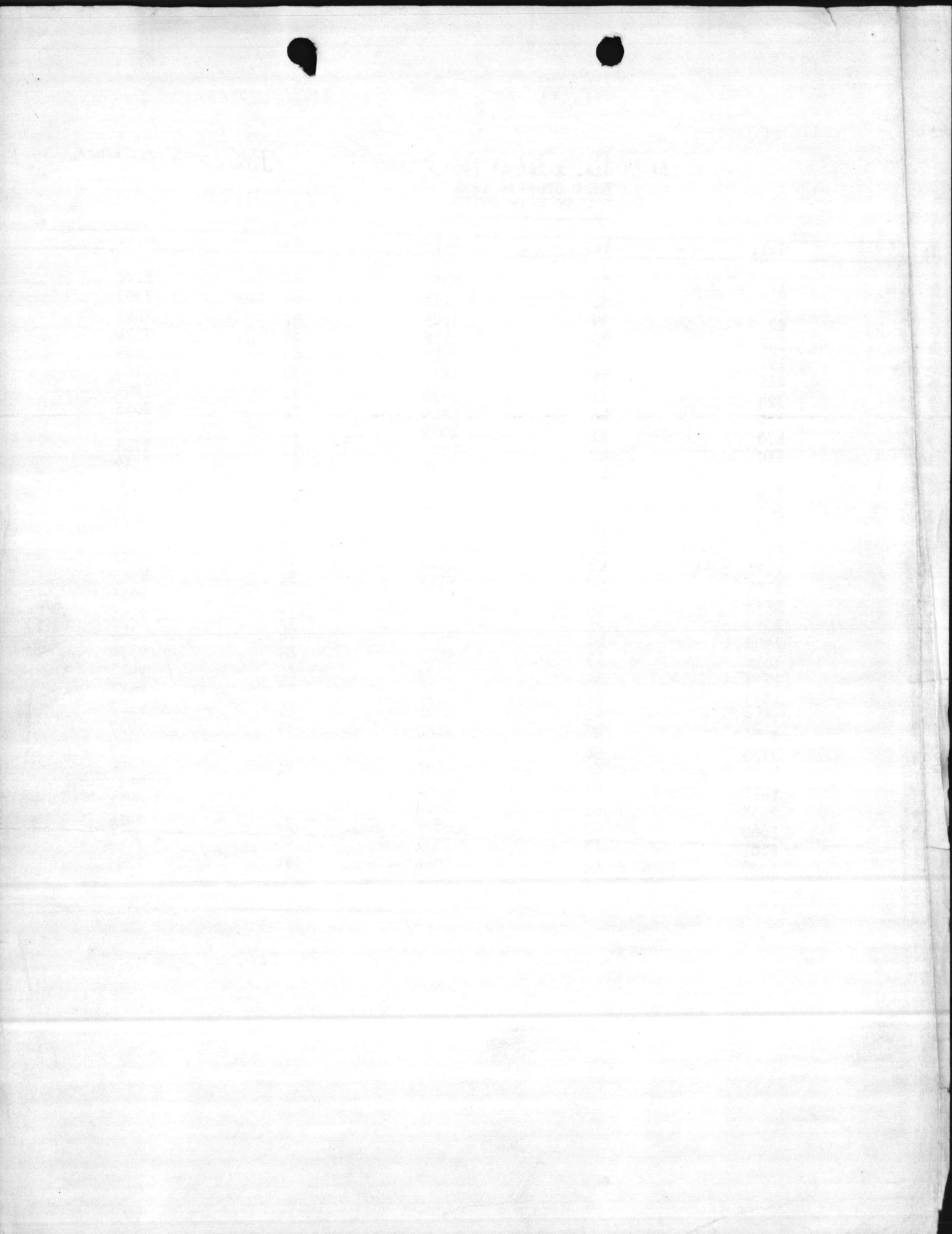
11/12/61

8' 0" dia. x 26' 6" (96" x 318")

BULK STORAGE TANK
WITH FLAT HEADS

JUNIOR & SENIOR

In.	Gal.	In.	Gal.	In.	Gal.
1	17	33	3032	65	7180
2	49	34	3158	66	7303
3	92	35	3285	67	7425
4	142	36	3412	68	7546
5	197	37	3541	69	7665
6	259	38	3670	70	7783
7	324	39	3798	71	7901
8	396	40	3929	72	8015
9	470	41	4059	73	8130
10	550	42	4191	74	8241
11	633	43	4322	75	8352
12	719	44	4454	76	8460
13	808	45	4586	77	8565
14	898	46	4718	78	8670
15	994	47	4849	79	8772
16	1091	48	4981	80	8872
17	1191	49	5113	81	8969
18	1293	50	5245	82	9065
19	1398	51	5377	83	9155
20	1502	52	5509	84	9244
21	1611	53	5641	85	9330
22	1722	54	5772	86	9413
23	1833	55	5904	87	9492
24	1948	56	6034	88	9567
25	2026	57	6164	89	9639
26	2180	58	6293	90	9704
27	2297	59	6422	91	9766
28	2417	60	6551	92	9821
29	2538	61	6678	93	9871
30	2660	62	6805	94	9914
31	2782	63	6931	95	9945
32	2907	64	7056	96	9962



30,000 gallon tank

m-625

depth inches	gallons
1	35.94
2	101.44
3	185.96
4	285.62
5	397.22
6	522.20
7	656.44
8	800.05
9	952.28
10	1112.55
11	1280.32
12	1455.13
13	1636.66
14	1824.34
15	2018.06
16	2217.45
17	2422.24
18	2632.18
19	2847.03
20	3066.59
21	3290.64
22	3519.02
23	3751.52
24	3987.98
25	4228.24
26	4472.15
27	4719.55
28	4970.31
29	5224.28
30	5481.34
31	5741.37
32	6004.25
33	6269.84
34	6538.04

depth inches	gallons
35	6808.74
36	7081.84
37	7357.22
38	7634.78
39	7914.43
40	8196.06
41	8479.58
42	8764.89
43	9051.91
44	9340.54
45	9630.70
46	9922.29
47	10215.24
48	10509.45
49	10804.84
50	11101.32
51	11398.83
52	11697.26
53	11996.56
54	12296.63
55	12597.40
56	12898.78
57	13200.70
58	13503.08
59	13805.84
60	14108.92
61	14412.22
62	14715.67
63	15019.20
64	15322.73
65	15626.18
66	15929.48
67	16232.56
68	16535.32



30,000 gallon tank

depth inches	gallons	depth inches	gallons
69	16837.70	103	26286.88
70	17139.62	104	26519.38
71	17441.00	105	26747.76
72	17741.77	106	26971.81
73	18041.84	107	27191.37
74	18341.14	108	27406.22
75	18639.57	109	27616.16
76	18937.08	110	27820.95
77	19233.56	111	28020.34
78	19528.95	112	28214.06
79	19823.16	113	28401.80
80	20116.11	114	28583.27
81	20407.70	115	28758.08
82	20697.86	116	28925.85
83	20986.49	117	29086.12
84	21273.57	118	29238.35
85	21558.82	119	29381.96
86	21842.24	120	29516.20
87	22123.97	121	29641.18
88	22403.62	122	29752.78
89	22681.18	123	29852.44
90	22956.56	124	29936.96
91	23229.66	125	30002.46
92	23500.36	126	30038.40
93	23768.56		
94	24034.15		
95	24297.03		
96	24557.06		
97	24814.12		
98	25068.09		
99	25318.85		
100	25566.25		
101	25810.16		
102	26050.42		



30,000 Gal. Tank

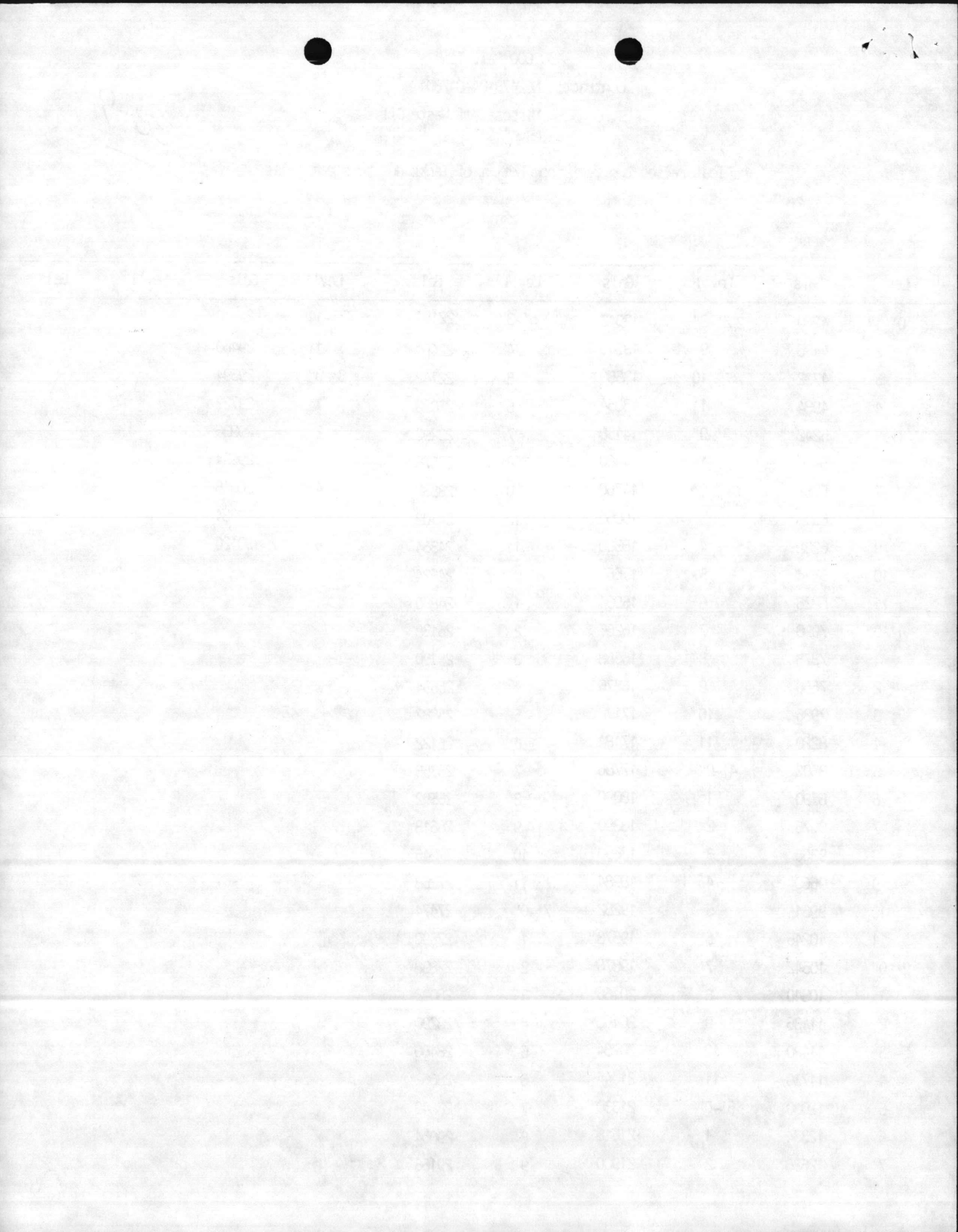
Contract: N62470-84-C-7804

Disposal of Waste Oil

BB-9

Float raised two feet from bottom of tanks due to steam coils

Lev'l	Gals	Lev'l	Gals	Lev'l	Gals.	Lev'l	Gals	Lev'l	Gals
0'-1"	4240	2'-8"	12942	5'-3"	22184	7'-10"	29316		
2	4486	9	13246	4	22460	11	29460		
3	4732	10	13550	5	22742	8'-0"	29594		
4	4984	11	13854	6	23022	1	29722		
5	5242	3'-0"	14158	7	23292	2	29836		
6	5496	1	14460	8	23578	3	29934		
7	5758	2	14760	9	23838	4	30018		
8	6018	3	15060	10	24102	5	30084		
9	6282	4	15360	11	24364	6	30120		
10	6544	5	15660	6'-0"	24624				
11	6828	6	15964	1	24880				
1'-0"	7098	7	16266	2	25138				
1	7378	8	16568	3	25190				
2	7660	9	16876	4	25634				
3	7936	10	17176	5	25882				
4	8220	11	17484	6	26122				
5	8502	4'-0"	17786	7	26358				
6	8790	1	18090	8	26592				
7	9076	2	18390	9	26618				
8	9366	3	18690	10	27046				
9	9660	4	18984	11	27268				
10	9954	5	19282	7'-0"	27474				
11	10246	6	19578	1	27690				
2'-0"	10542	7	19876	2	27898				
1	10840	8	20166	3	28098				
2	11136	9	20460	4	28290				
3	11430	10	20754	5	28480				
4	11730	11	21044	6	28662				
5	12030	5'-0"	21330	7	28840				
6	12334	1	21618	8	29004				
7	12636	2	21900	9	29166				



JONES & FRANK

"Fluid Handling Equipment"

Lev'l	Gals.	Lev'l	Gals.	Lev'l	Gals.	Lev'l	Gals.	Lev'l	Gals.
0'-1"	36	2'-3"	4732	4'-5"	12030	6'-7"	19876	8'-9"	26618
2	102	4	4984	6	12334	8	20766	10	27046
3	186	5	5242	7	12636	9	20460	11	27268
4	286	6	5496	8	12942	10	20754	9'-0"	27484
5	400	7	5758	9	13246	11	21044	1	27690
6	526	8	6018	10	13550	7'-0"	21330	2	27898
7	660	9	6282	11	13854	1	21618	3	28098
8	804	10	6544	5'-0"	14158	2	21900	4	28290
9	954	11	6828	1	14460	3	22184	5	28480
10	1116	3'-0"	7098	2	14760	4	22460	6	28662
11	1280	1	7378	3	15060	5	22742	7	28840
1'-0"	1458	2	7660	4	15360	6	23022	8	29004
1	1640	3	7936	5	15660	7	23292	9	29166
2	1830	4	8220	6	15964	8	23578	10	29316
3	2022	5	8502	7	16266	9	23838	11	29460
4	2224	6	8790	8	16568	10	24102	10'-0"	29594
5	2430	7	9076	9	16876	11	24364	1	29722
6	2636	8	9366	10	17178	8'-0"	24624	2	29836
7	2852	9	9660	11	17484	1	24880	3	29934
8	3076	10	9954	6'-0"	17786	2	25138	4	30018
9	3304	11	10246	1	18090	3	25190	5	30084
10	3528	4'-0"	10542	2	18390	4	25634	6	30120
11	3762	1	10840	3	18690	5	25882		
2'-0"	4000	2	11136	4	18984	6	26122		
1	4240	3	11430	5	19282	7	26358		
2	4486	4	11730	6	19578	8	26592		

YOUR FLUID HANDLING
SPECIALISTS

RECEIVED

R & W Construction Co., Inc.

Date 1-22-86

BRANCHES

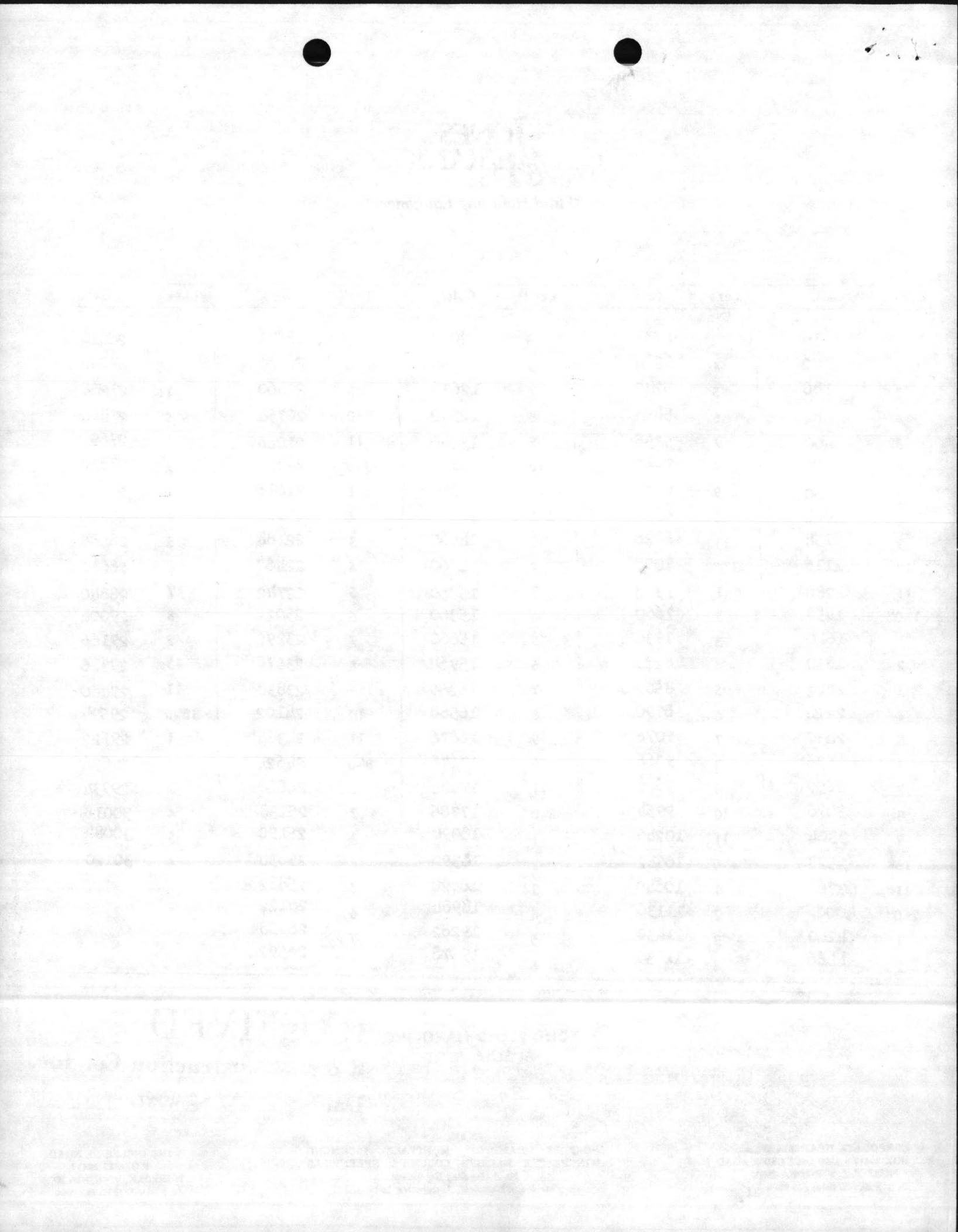
NORFOLK HAMPTON MONTVALE RICHMOND
WINCHESTER RALEIGH COLUMBIA GREENVILLE

Fluid Handling Equipment:

Petroleum, Chemical, Automotive, Industrial

1800 INGLESIDE ROAD
P.O. BOX 12417
NORFOLK, VIRGINIA 23502
PHONE (804) 853-2600

CORPORATE HEADQUARTERS
P.O. BOX 12417 • 1800 INGLESIDE ROAD
NORFOLK, VIRGINIA 23502
PHONE (804) 853-2600



High Point Boiler & Tank COMPANY, INC.

STANLEY BROTHERS

2411 English Street - Phone 2-4217
HIGH POINT, NORTH CAROLINA

BB-9
+ RR-15

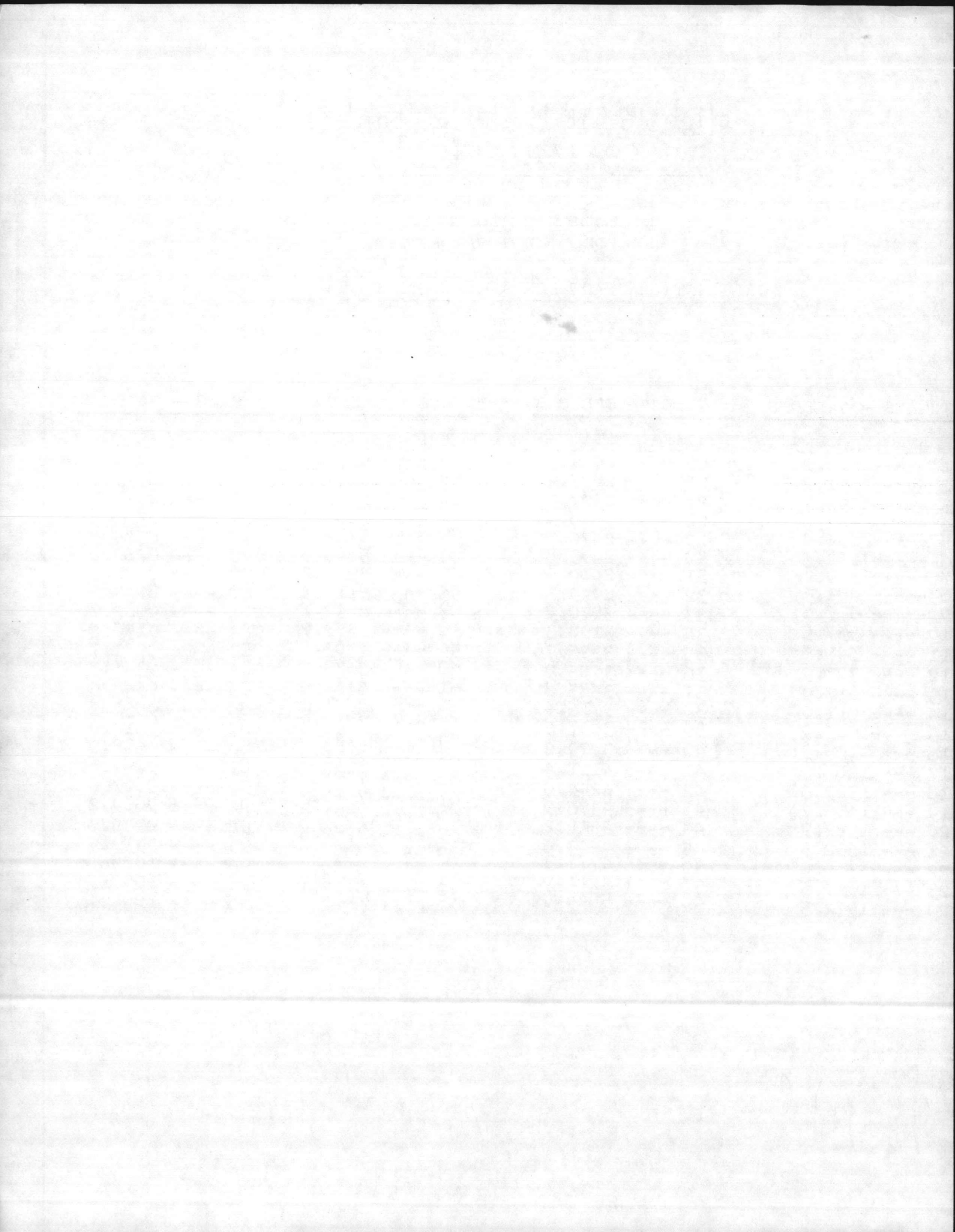
CALIBRATION CHART FOR 10,000 GALLON TANK

96" DIAMETER X 26'10" LONG

<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>
1 ----- 18.2	25 ----- 2089.2	49 ----- 5178.6	73 ----- 8232.1
2 ----- 51.2	26 ----- 2207.4	50 ----- 5312.3	74 ----- 8345.6
3 ----- 93.7	27 ----- 2327.1	51 ----- 5446.0	75 ----- 8457.1
4 ----- 143.9	28 ----- 2448.0	52 ----- 5579.4	76 ----- 8566.7
5 ----- 200.4	29 ----- 2570.3	53 ----- 5712.7	77 ----- 8674.4
6 ----- 262.6	30 ----- 2693.8	54 ----- 5845.6	78 ----- 8780.0
7 ----- 329.8	31 ----- 2818.4	55 ----- 5978.2	79 ----- 8883.3
8 ----- 401.6	32 ----- 2944.1	56 ----- 6110.4	80 ----- 8983.3
9 ----- 477.6	33 ----- 3070.7	57 ----- 6242.1	81 ----- 9082.7
10 ----- 557.5	34 ----- 3198.3	58 ----- 6373.2	82 ----- 9178.6
11 ----- 641.0	35 ----- 3326.7	59 ----- 6503.8	83 ----- 9271.7
12 ----- 727.9	36 ----- 3455.9	60 ----- 6633.7	84 ----- 9361.7
13 ----- 817.9	37 ----- 3585.8	61 ----- 6762.9	85 ----- 9448.6
14 ----- 911.0	38 ----- 3716.4	62 ----- 6891.3	86 ----- 9532.1
15 ----- 1006.9	39 ----- 3847.5	63 ----- 7018.9	87 ----- 9612.0
16 ----- 1105.3	40 ----- 3979.2	64 ----- 7145.5	88 ----- 9688.0
17 ----- 1206.3	41 ----- 4111.4	65 ----- 7271.2	89 ----- 9759.8
18 ----- 1309.6	42 ----- 4244.0	66 ----- 7395.8	90 ----- 9827.0
19 ----- 1415.2	43 ----- 4376.9	67 ----- 7519.3	91 ----- 9889.2
20 ----- 1522.9	44 ----- 4510.2	68 ----- 7641.6	92 ----- 9945.7
21 ----- 1632.5	45 ----- 4643.6	69 ----- 7762.5	93 ----- 9999.9
22 ----- 1744.0	46 ----- 4777.3	70 ----- 7882.2	94 ----- 10038.4
23 ----- 1857.5	47 ----- 4911.0	71 ----- 8000.4	95 ----- 10071.4
24 ----- 1972.5	48 ----- 5044.8	72 ----- 8117.1	96 ----- 10089.6

Tanks at
650
78 gal per inch.

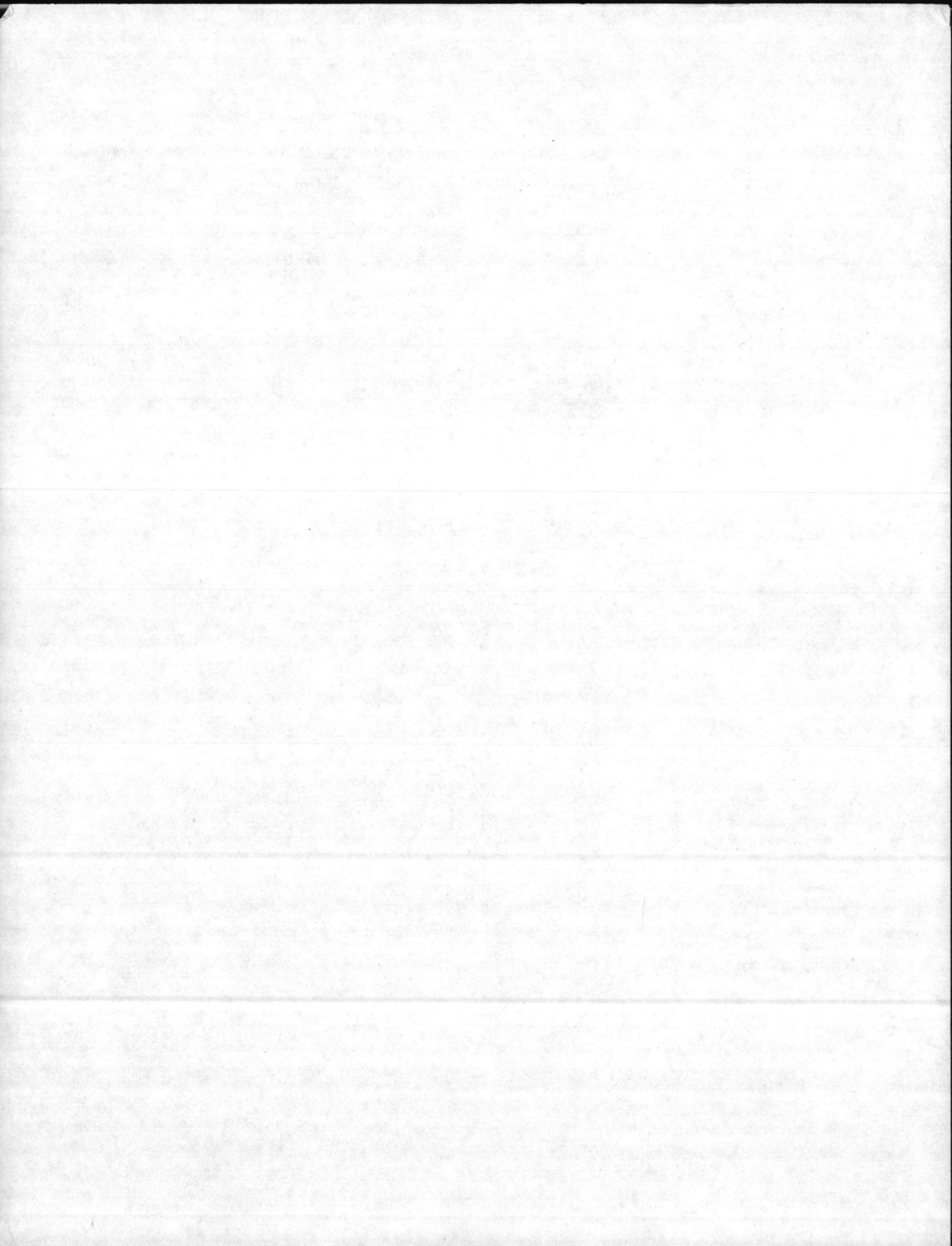
177 gals of oil = 1 Ton of coal



M-230
M-230

Capacity in Gallons for a Tank, 15,000 gal., 10' dia. 26'6" lgth.

<i>inches</i>		<i>gals.</i>
3	-	104
6	-	291
9	-	531
12	-	810
15	-	1,123
18	-	1,464
21	-	1,830
24	-	2,217
27	-	2,622
30	-	3,044
33	-	3,480
36	-	3,929
39	-	4,388
42	-	4,857
45	-	5,333
48	-	5,816
51	-	6,304
54	-	6,795
57	-	7,290
60	-	7,786
63	-	8,280
66	-	8,775
69	-	9,266
72	-	9,754
75	-	10,237
78	-	10,713
81	-	11,182
84	-	11,641
87	-	12,090
90	-	12,526
93	-	12,948
96	-	13,353
99	-	13,740
102	-	14,106
105	-	14,447
108	-	14,770
111	-	15,049
114	-	15,290
117	-	15,477
120	-	15,581



M-230
M-230

Capacity in Gallons for a Tank, 15,000 gal., 10' dia. 26'6" lgth.

<i>inches</i>		<i>Gals.</i>
3	-	104
6	-	291
9	-	531
12	-	810
15	-	1,123
18	-	1,464
21	-	1,830
24	-	2,217
27	-	2,622
30	-	3,044
33	-	3,480
36	-	3,929
39	-	4,388
42	-	4,857
45	-	5,333
48	-	5,816
51	-	6,304
54	-	6,795
57	-	7,290
60	-	7,786
63	-	8,280
66	-	8,775
69	-	9,266
72	-	9,754
75	-	10,237
78	-	10,713
81	-	11,182
84	-	11,641
87	-	12,090
90	-	12,526
93	-	12,948
96	-	13,353
99	-	13,740
102	-	14,106
105	-	14,447
108	-	14,770
111	-	15,049
114	-	15,290
117	-	15,477
120	-	15,581

~~BA-106~~

BA-106

BUFFALO TANK CORPORATION
BALTIMORE, MARYLAND

CALIBRATION CHART
10'-0" DIA. X 17'0 $\frac{1}{2}$ " SHELL
FLAT HEADS

FF-10120

<u>INCHES</u>	<u>GALLONS</u>	<u>INCHES</u>	<u>GALLONS</u>	<u>INCHES</u>	<u>GALLONS</u>	<u>INCHES</u>	<u>GALLONS</u>
1	13	31	2064	61	5147	91	8201
2	36	32	2158	62	5254	92	8292
3	67	33	2253	63	5362	93	8382
4	103	34	2349	64	5467	94	8471
5	144	35	2446	65	5575	95	8558
6	188	36	2543	66	5680	96	8645
7	237	37	2642	67	5787	97	8730
8	288	38	2741	68	5893	98	8813
9	343	39	2841	69	5999	99	8895
10	401	40	2941	70	6105	100	8976
11	462	41	3042	71	6210	101	9055
12	525	42	3144	72	6315	102	9132
13	590	43	3246	73	6419	103	9207
14	657	44	3349	74	6523	104	9281
15	727	45	3453	75	6627	105	9353
16	799	46	3556	76	6731	106	9422
17	872	47	3660	77	6834	107	9490
18	948	48	3765	78	6936	108	9555
19	1025	49	3870	79	7038	109	9618
20	1104	50	3975	80	7139	110	9679
21	1185	51	4081	81	7239	111	9736
22	1267	52	4187	82	7339	112	9791
23	1350	53	4293	83	7438	113	9843
24	1435	54	4399	84	7537	114	9892
25	1521	55	4506	85	7634	115	9936
26	1609	56	4612	86	7731	116	9977
27	1698	57	4719	87	7827	117	10013
28	1788	58	4826	88	7922	118	10043
29	1878	59	4933	89	8016	119	10067
30	1971	60	5040	90	8109	120	10080

The above is an average table only and not theoretically correct. Do not use on mechanical gauging devices.

BALTIMORE, MARYLAND
 CALIBRATION CHART
 10-0, BAR X 1000, SERIAL
 10-10100

INCHES	CALIBRATION	INCHES	CALIBRATION
1	101	1	101
2	102	2	102
3	103	3	103
4	104	4	104
5	105	5	105
6	106	6	106
7	107	7	107
8	108	8	108
9	109	9	109
10	110	10	110
11	111	11	111
12	112	12	112
13	113	13	113
14	114	14	114
15	115	15	115
16	116	16	116
17	117	17	117
18	118	18	118
19	119	19	119
20	120	20	120
21	121	21	121
22	122	22	122
23	123	23	123
24	124	24	124
25	125	25	125
26	126	26	126
27	127	27	127
28	128	28	128
29	129	29	129
30	130	30	130

The above is an exact scale only and not
 theoretical control. Do not use on mechanical
 gauging devices.

10,000 gallon tank - 8' dia., 26'9"lgth

BA 106

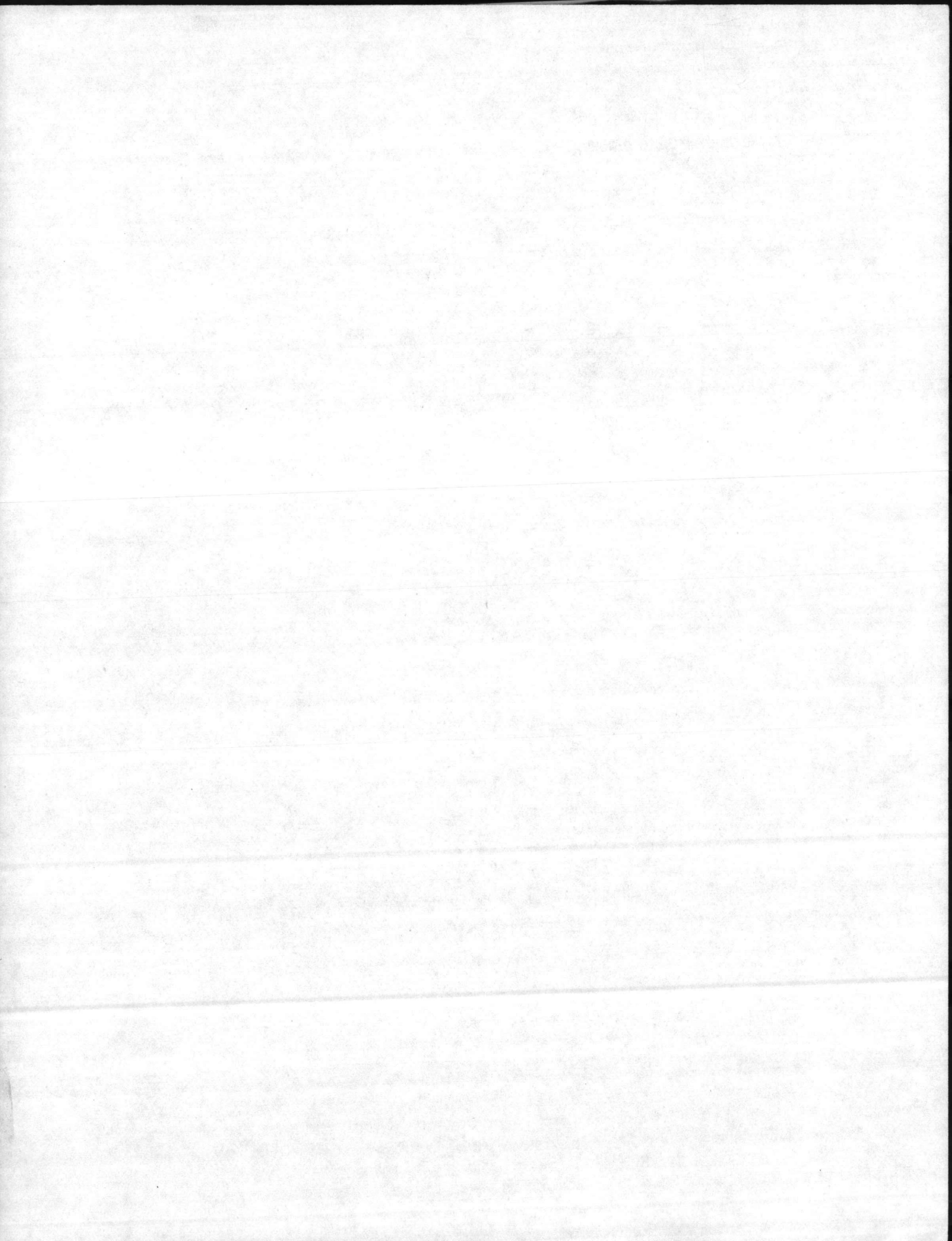
<u>Inches</u>	<u>gallons</u>
3	94
4	106
5	226
6	262
7	333
8	404
9	476
10	559
11	642
12	726
13	818
14	910
15	1004
16	1105
17	1206
18	1306
19	1415
20	1520
21	1627
22	1741
23	1854
24	1967
25	2084
26	2202
27	2321
28	2442
29	2564
30	2685
31	2810
32	2935
33	3061
34	3189
35	3317
36	3445
37	3575
38	3705
39	3836
40	3968
41	4100
42	4231
43	4363
44	4496
45	4629
46	4762
47	4895
48	5029
49	5162
50	5295

<u>Inches</u>	<u>gallons</u>
51	5429
52	5558
53	5687
54	5817
55	5945
56	6073
57	6212
58	6339
59	6465
60	6593
61	6727
62	6861
63	6997
64	7115
65	7234
66	7353
67	7475
68	7599
69	7718
70	7836
71	7954
72	8071
73	8185
74	8298
75	8411
76	8518
77	8625
78	8732
79	8833
80	8934
81	9034
82	9127
83	9220
84	9312
85	9396
86	9479
87	9562
88	9634
89	9705
90	9776
91	9832
92	9888
93	9944
94	9976
95	10,007
96	10,038

M-230
M-230

Capacity in Gallons for a Tank, 15,000 gal., 10' dia. 26'6" lgth.

<i>inches</i>		<i>Gals.</i>
3	-	104
6	-	291
9	-	531
12	-	810
15	-	1,123
18	-	1,464
21	-	1,830
24	-	2,217
27	-	2,622
30	-	3,044
33	-	3,480
36	-	3,929
39	-	4,388
42	-	4,857
45	-	5,333
48	-	5,816
51	-	6,304
54	-	6,795
57	-	7,290
60	-	7,786
63	-	8,280
66	-	8,775
69	-	9,266
72	-	9,754
75	-	10,237
78	-	10,713
81	-	11,182
84	-	11,641
87	-	12,090
90	-	12,526
93	-	12,948
96	-	13,353
99	-	13,740
102	-	14,106
105	-	14,447
108	-	14,770
111	-	15,049
114	-	15,290
117	-	15,477
120	-	15,581

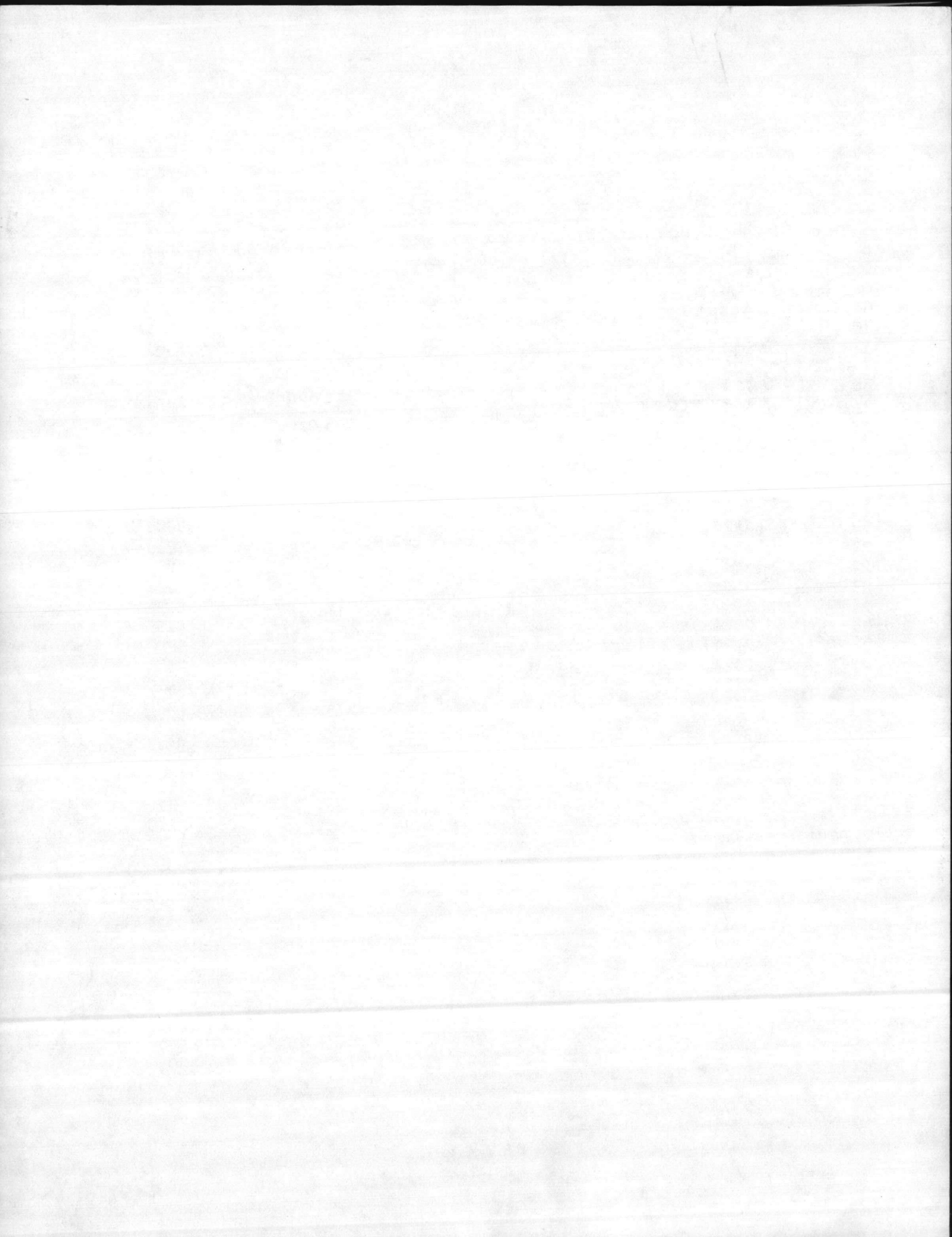


10,000 gallon tank - 8' dia., 26'9" length

BA106

<u>Inches</u>	<u>gallons</u>
3	94
4	106
5	226
6	262
7	333
8	404
9	476
10	559
11	642
12	726
13	818
14	910
15	1004
16	1105
17	1206
18	1306
19	1415
20	1520
21	1627
22	1741
23	1854
24	1967
25	2084
26	2202
27	2321
28	2442
29	2564
30	2685
31	2810
32	2935
33	3061
34	3189
35	3317
36	3445
37	3575
38	3705
39	3836
40	3968
41	4100
42	4231
43	4363
44	4496
45	4629
46	4762
47	4895
48	5029
49	5162
50	5295

<u>Inches</u>	<u>gallons</u>
51	5429
52	5558
53	5687
54	5817
55	5945
56	6073
57	6212
58	6339
59	6465
60	6593
61	6727
62	6861
63	6997
64	7115
65	7234
66	7353
67	7475
68	7599
69	7718
70	7836
71	7954
72	8071
73	8185
74	8298
75	8411
76	8518
77	8625
78	8732
79	8833
80	8934
81	9034
82	9127
83	9220
84	9312
85	9396
86	9479
87	9562
88	9634
89	9705
90	9776
91	9832
92	9888
93	9944
94	9976
95	10,007
96	10,038



~~BA-106~~

BA-106

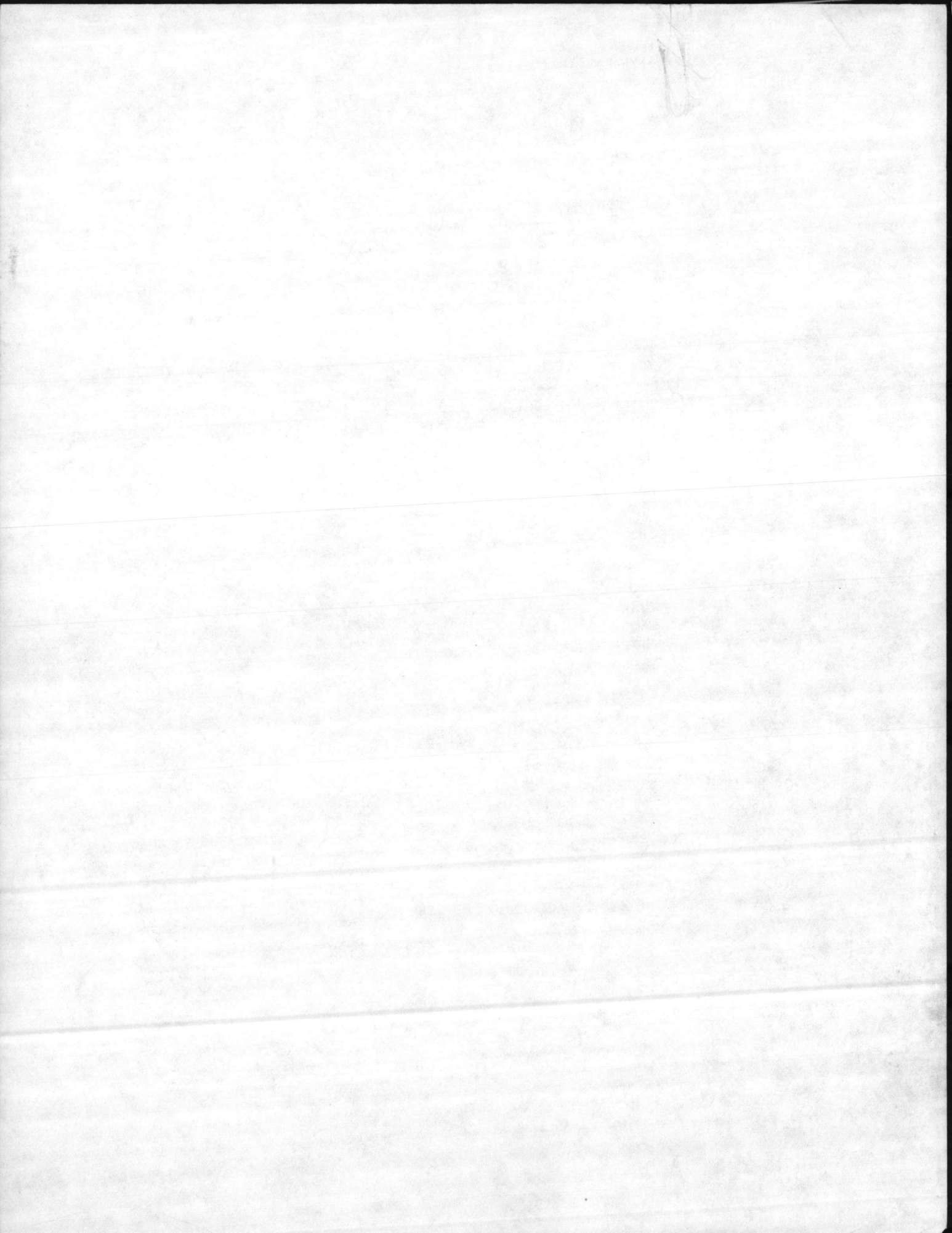
BUFFALO TANK CORPORATION
BALTIMORE, MARYLAND

CALIBRATION CHART
10'-0" DIA. X 17'0 $\frac{1}{2}$ " SHELL
FLAT HEADS

FF-10120

<u>INCHES</u>	<u>GALLONS</u>	<u>INCHES</u>	<u>GALLONS</u>	<u>INCHES</u>	<u>GALLONS</u>	<u>INCHES</u>	<u>GALLONS</u>
1	13	31	2064	61	5147	91	8201
2	36	32	2158	62	5254	92	8292
3	67	33	2253	63	5362	93	8382
4	103	34	2349	64	5467	94	8471
5	144	35	2446	65	5575	95	8558
6	188	36	2543	66	5680	96	8645
7	237	37	2642	67	5787	97	8730
8	288	38	2741	68	5893	98	8813
9	343	39	2841	69	5999	99	8895
10	401	40	2941	70	6105	100	8976
11	462	41	3042	71	6210	101	9055
12	525	42	3144	72	6315	102	9132
13	590	43	3246	73	6419	103	9207
14	657	44	3349	74	6523	104	9281
15	727	45	3453	75	6627	105	9353
16	799	46	3556	76	6731	106	9422
17	872	47	3660	77	6834	107	9490
18	948	48	3765	78	6936	108	9555
19	1025	49	3870	79	7038	109	9618
20	1104	50	3975	80	7139	110	9679
21	1185	51	4081	81	7239	111	9736
22	1267	52	4187	82	7339	112	9791
23	1350	53	4293	83	7438	113	9843
24	1435	54	4399	84	7537	114	9892
25	1521	55	4506	85	7634	115	9936
26	1609	56	4612	86	7731	116	9977
27	1698	57	4719	87	7827	117	10013
28	1788	58	4826	88	7922	118	10043
29	1878	59	4933	89	8016	119	10067
30	1971	60	5040	90	8109	120	10080

The above is an average table only and not theoretically correct. Do not use on mechanical gauging devices.



High Point Boiler & Tank

COMPANY, INC.

STANLEY BROTHERS

2411 English Street - Phone 2-4217
HIGH POINT, NORTH CAROLINA

BB-9
+ RR-15

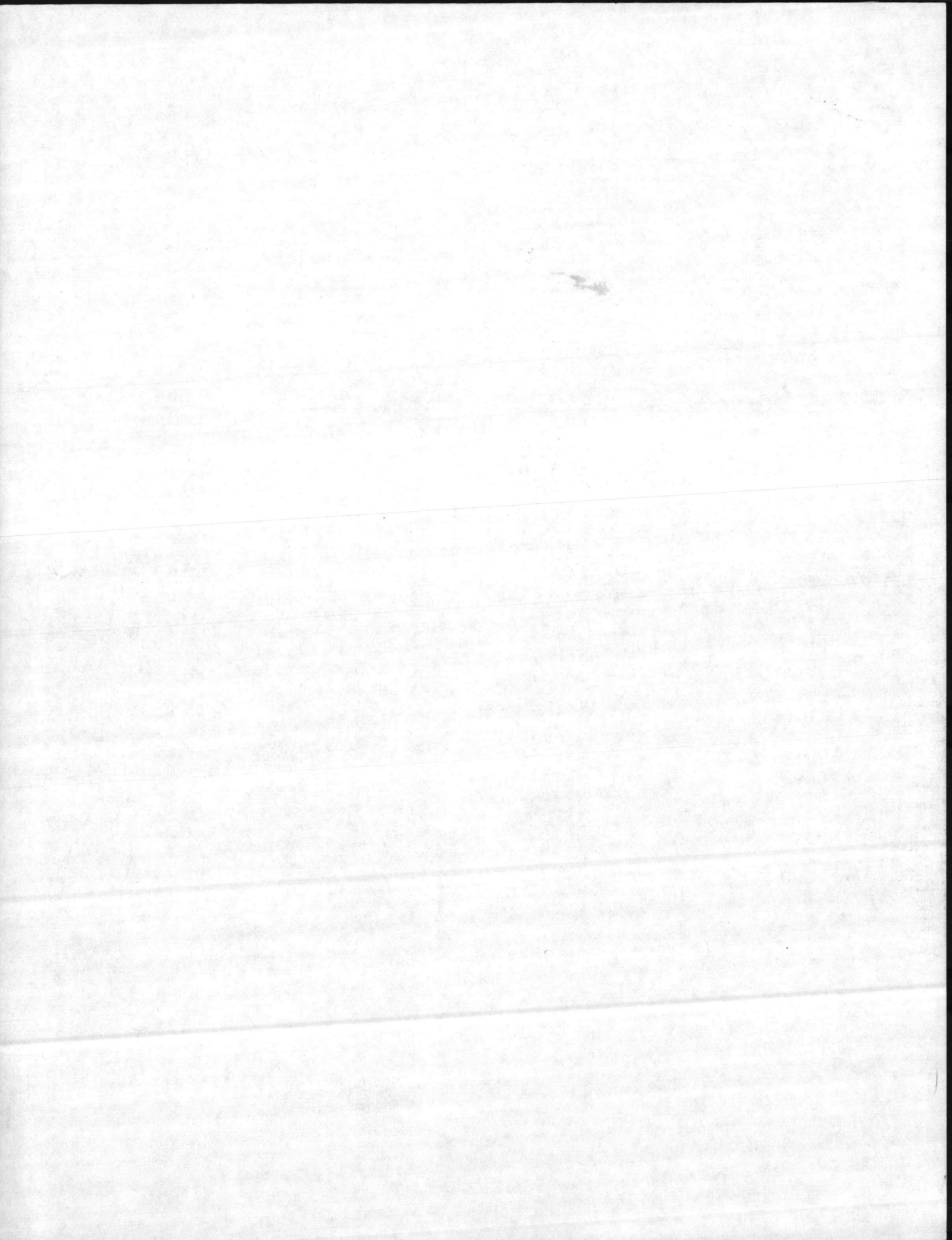
CALIBRATION CHART FOR 10,000 GALLON TANK

96" DIAMETER X 26'10" LONG

<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>
1 ----- 18.2	25 ----- 2089.2	49 ----- 5178.6	73 ----- 8232.1
2 ----- 51.2	26 ----- 2207.4	50 ----- 5312.3	74 ----- 8345.6
3 ----- 93.7	27 ----- 2327.1	51 ----- 5446.0	75 ----- 8457.1
4 ----- 143.9	28 ----- 2448.0	52 ----- 5579.4	76 ----- 8566.7
5 ----- 200.4	29 ----- 2570.3	53 ----- 5712.7	77 ----- 8674.4
6 ----- 262.6	30 ----- 2693.8	54 ----- 5845.6	78 ----- 8780.0
7 ----- 329.8	31 ----- 2818.4	55 ----- 5978.2	79 ----- 8883.3
8 ----- 401.6	32 ----- 2944.1	56 ----- 6110.4	80 ----- 8983.3
9 ----- 477.6	33 ----- 3070.7	57 ----- 6242.1	81 ----- 9082.7
10 ----- 557.5	34 ----- 3198.3	58 ----- 6373.2	82 ----- 9178.6
11 ----- 641.0	35 ----- 3326.7	59 ----- 6503.8	83 ----- 9271.7
12 ----- 727.9	36 ----- 3455.9	60 ----- 6633.7	84 ----- 9361.7
13 ----- 817.9	37 ----- 3585.8	61 ----- 6762.9	85 ----- 9448.6
14 ----- 911.0	38 ----- 3716.4	62 ----- 6891.3	86 ----- 9532.1
15 ----- 1006.9	39 ----- 3847.5	63 ----- 7018.9	87 ----- 9612.0
16 ----- 1105.3	40 ----- 3979.2	64 ----- 7145.5	88 ----- 9688.0
17 ----- 1206.3	41 ----- 4111.4	65 ----- 7271.2	89 ----- 9759.8
18 ----- 1309.6	42 ----- 4244.0	66 ----- 7395.8	90 ----- 9827.0
19 ----- 1415.2	43 ----- 4376.9	67 ----- 7519.3	91 ----- 9889.2
20 ----- 1522.9	44 ----- 4510.2	68 ----- 7641.6	92 ----- 9945.7
21 ----- 1632.5	45 ----- 4643.6	69 ----- 7762.5	93 ----- 9959.9
22 ----- 1744.0	46 ----- 4777.3	70 ----- 7882.2	94 ----- 10038.4
23 ----- 1857.5	47 ----- 4911.0	71 ----- 8000.4	95 ----- 10071.4
24 ----- 1972.5	48 ----- 5044.8	72 ----- 8117.1	96 ----- 10089.6

Tanks at
B 650
2 78 gal per inch.

177 gals of oil = 1 Ton of coal



High Point Boiler & Tank COMPANY, INC.

STANLEY BROTHERS

2411 English Street - Phone 2-4217
HIGH POINT, NORTH CAROLINA

BB-9
+ RR-15

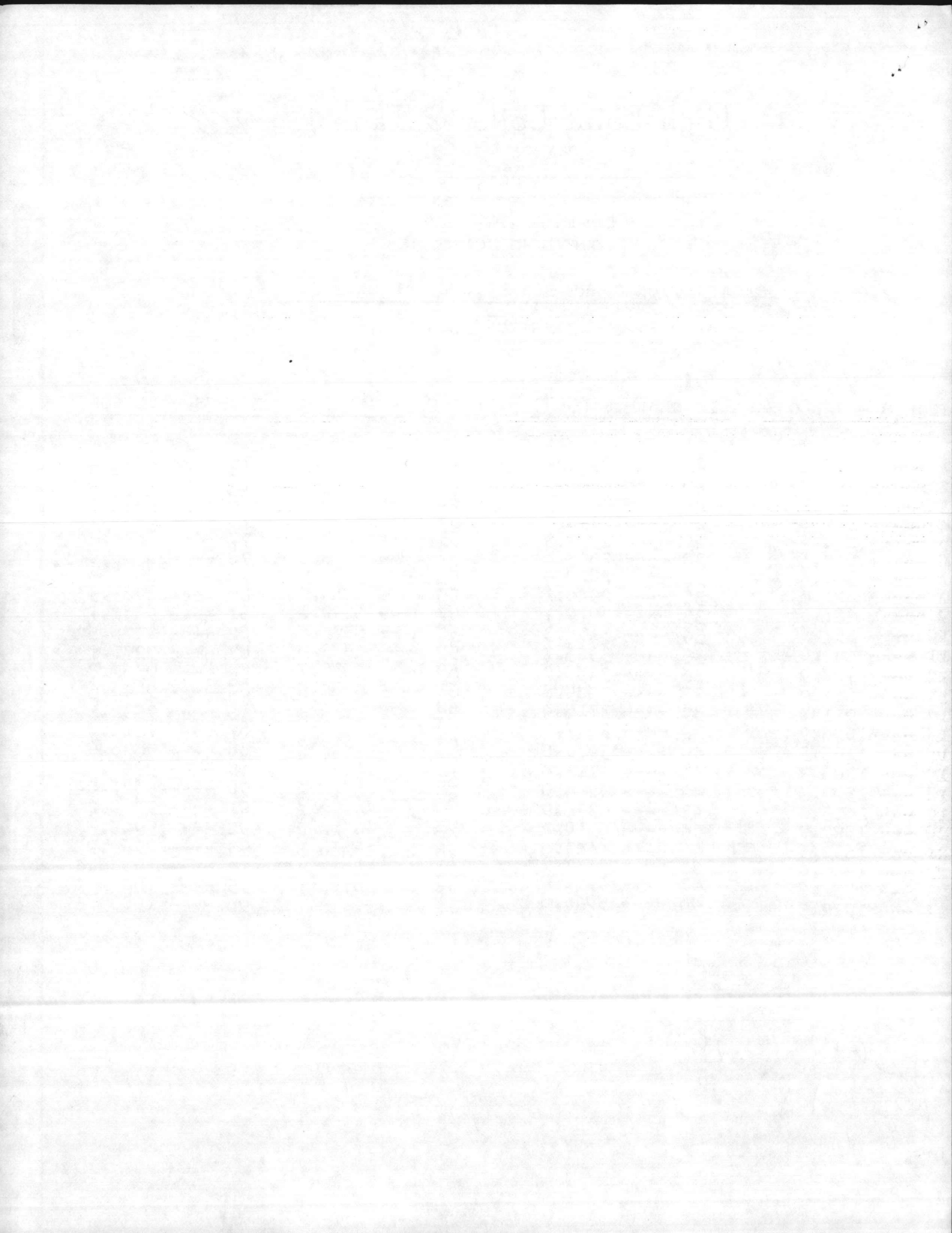
CALIBRATION CHART FOR 10,000 GALLON TANK

96" DIAMETER X 26'10" LONG

INCHES - GALLONS	INCHES - GALLONS	INCHES - GALLONS	INCHES - GALLONS
1 ----- 18.2	25 ----- 2089.2	49 ----- 5178.6	73 ----- 8232.1
2 ----- 51.2	26 ----- 2207.4	50 ----- 5312.3	74 ----- 8345.6
3 ----- 93.7	27 ----- 2327.1	51 ----- 5446.0	75 ----- 8457.1
4 ----- 143.9	28 ----- 2448.0	52 ----- 5579.4	76 ----- 8566.7
5 ----- 200.4	29 ----- 2570.3	53 ----- 5712.7	77 ----- 8674.4
6 ----- 262.6	30 ----- 2693.8	54 ----- 5845.6	78 ----- 8780.0
7 ----- 329.8	31 ----- 2818.4	55 ----- 5978.2	79 ----- 8883.3
8 ----- 401.6	32 ----- 2944.1	56 ----- 6110.4	80 ----- 8983.3
9 ----- 477.6	33 ----- 3070.7	57 ----- 6242.1	81 ----- 9082.7
10 ----- 557.5	34 ----- 3198.3	58 ----- 6373.2	82 ----- 9178.6
11 ----- 641.0	35 ----- 3326.7	59 ----- 6503.8	83 ----- 9271.7
12 ----- 727.9	36 ----- 3455.9	60 ----- 6633.7	84 ----- 9351.7
13 ----- 817.9	37 ----- 3585.8	61 ----- 6762.9	85 ----- 9448.6
14 ----- 911.0	38 ----- 3716.4	62 ----- 6891.3	86 ----- 9532.1
15 ----- 1006.9	39 ----- 3847.5	63 ----- 7018.9	87 ----- 9612.0
16 ----- 1105.3	40 ----- 3979.2	64 ----- 7145.5	88 ----- 9688.0
17 ----- 1206.3	41 ----- 4111.4	65 ----- 7271.2	89 ----- 9759.8
18 ----- 1309.6	42 ----- 4244.0	66 ----- 7395.8	90 ----- 9827.0
19 ----- 1415.2	43 ----- 4376.9	67 ----- 7519.3	91 ----- 9889.2
20 ----- 1522.9	44 ----- 4510.2	68 ----- 7641.6	92 ----- 9945.7
21 ----- 1632.5	45 ----- 4643.6	69 ----- 7762.5	93 ----- 9999.9
22 ----- 1744.0	46 ----- 4777.3	70 ----- 7882.2	94 ----- 10038.4
23 ----- 1857.5	47 ----- 4911.0	71 ----- 8000.4	95 ----- 10071.4
24 ----- 1972.5	48 ----- 5044.8	72 ----- 8117.1	96 ----- 10089.6

ank at
650
2 78 gal per inch.

177 gals of oil = 1 Ton of coal



High Point Boiler & Tank COMPANY, INC.

STANLEY BROTHERS

2411 English Street - Phone 2-4217
HIGH POINT, NORTH CAROLINA

BB-9
4 RR-15

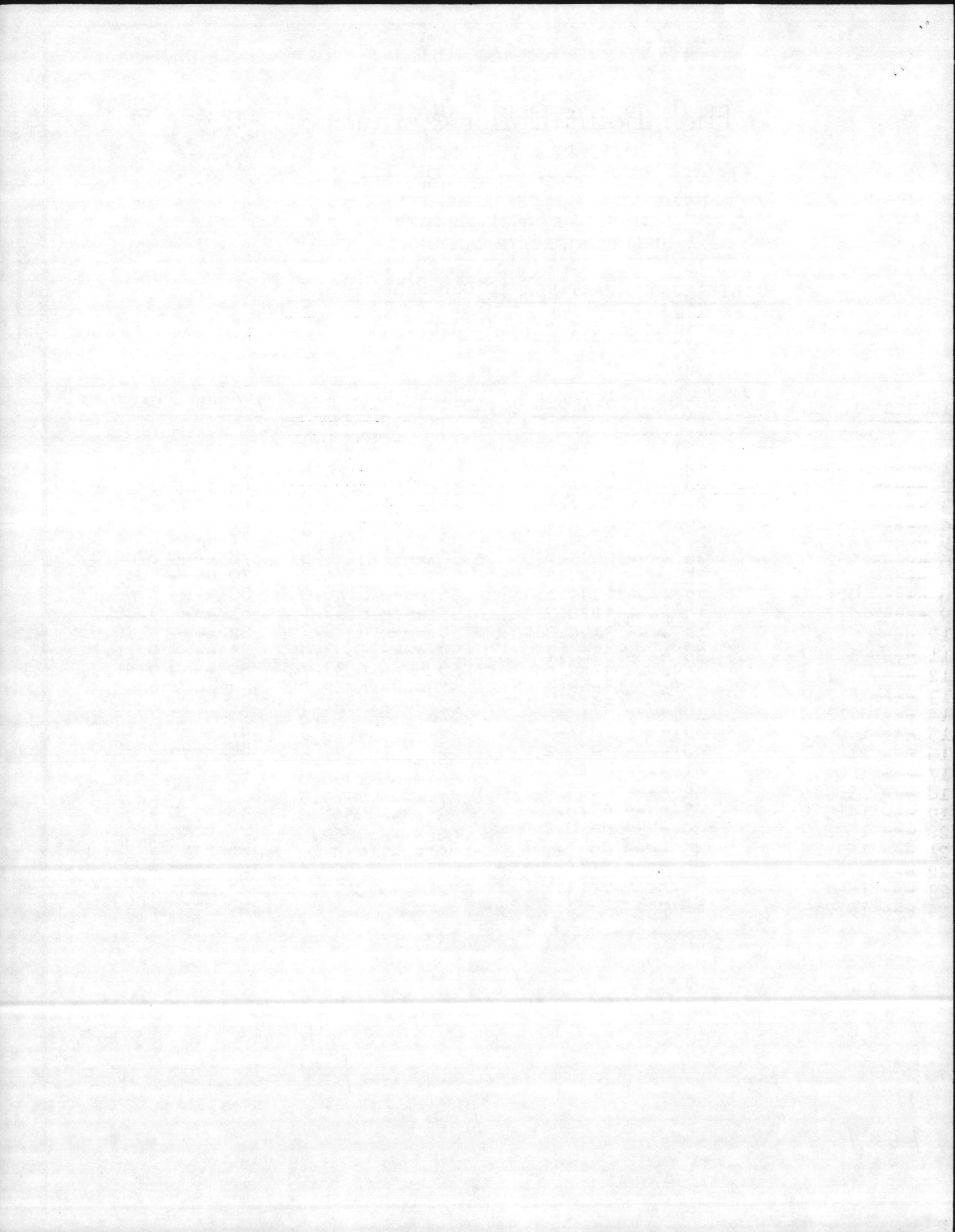
CALIBRATION CHART FOR 10,000 GALLON TANK

96" DIAMETER X 26'10" LONG

INCHES - GALLONS	INCHES - GALLONS	INCHES - GALLONS	INCHES - GALLONS
1 ----- 18.2	25 ----- 2089.2	49 ----- 5178.6	73 ----- 8232.1
2 ----- 51.2	26 ----- 2207.4	50 ----- 5312.3	74 ----- 8345.6
3 ----- 93.7	27 ----- 2327.1	51 ----- 5446.0	75 ----- 8457.1
4 ----- 143.9	28 ----- 2448.0	52 ----- 5579.4	76 ----- 8566.7
5 ----- 200.4	29 ----- 2570.3	53 ----- 5712.7	77 ----- 8674.4
6 ----- 262.6	30 ----- 2693.8	54 ----- 5845.6	78 ----- 8780.0
7 ----- 329.8	31 ----- 2818.4	55 ----- 5978.2	79 ----- 8883.3
8 ----- 401.6	32 ----- 2944.1	56 ----- 6110.4	80 ----- 8983.3
9 ----- 477.6	33 ----- 3070.7	57 ----- 6242.1	81 ----- 9082.7
10 ----- 557.5	34 ----- 3198.3	58 ----- 6373.2	82 ----- 9178.6
11 ----- 641.0	35 ----- 3326.7	59 ----- 6503.8	83 ----- 9271.7
12 ----- 727.9	36 ----- 3455.9	60 ----- 6633.7	84 ----- 9361.7
13 ----- 817.9	37 ----- 3585.8	61 ----- 6762.9	85 ----- 9448.6
14 ----- 911.0	38 ----- 3716.4	62 ----- 6891.3	86 ----- 9532.1
15 ----- 1006.9	39 ----- 3847.5	63 ----- 7018.9	87 ----- 9612.0
16 ----- 1105.3	40 ----- 3979.2	64 ----- 7145.5	88 ----- 9688.0
17 ----- 1206.3	41 ----- 4111.4	65 ----- 7271.2	89 ----- 9759.8
18 ----- 1309.6	42 ----- 4244.0	66 ----- 7395.8	90 ----- 9827.0
19 ----- 1415.2	43 ----- 4376.9	67 ----- 7519.3	91 ----- 9889.2
20 ----- 1522.9	44 ----- 4510.2	68 ----- 7641.6	92 ----- 9945.7
21 ----- 1632.5	45 ----- 4643.6	69 ----- 7762.5	93 ----- 9995.9
22 ----- 1744.0	46 ----- 4777.3	70 ----- 7882.2	94 ----- 10038.4
23 ----- 1857.5	47 ----- 4911.0	71 ----- 8000.4	95 ----- 10071.4
24 ----- 1972.5	48 ----- 5044.8	72 ----- 8117.1	96 ----- 10089.6

Tank at
650
78 gal per inch.

177 gals of oil = 1 Ton of coal



High Point Boiler & Tank COMPANY, INC.

STANLEY BROTHERS

2411 English Street - Phone 2-4217
HIGH POINT, NORTH CAROLINA

BB-9
RR-15

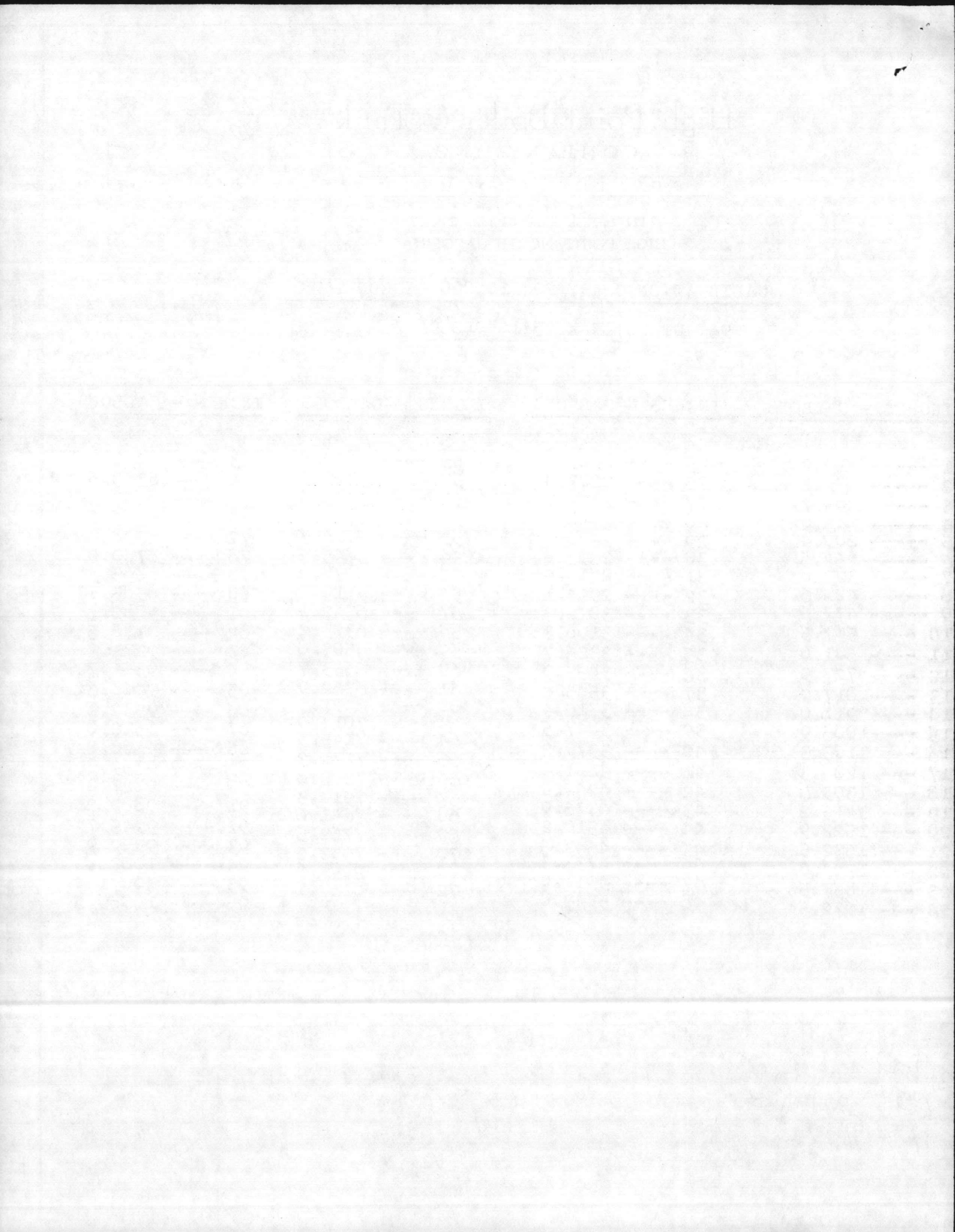
CALIBRATION CHART FOR 10,000 GALLON TANK

96" DIAMETER X 26'10" LONG

<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>
1 ----- 18.2	25 ----- 2089.2	49 ----- 5178.6	73 ----- 8232.1
2 ----- 51.2	26 ----- 2207.4	50 ----- 5312.3	74 ----- 8345.6
3 ----- 93.7	27 ----- 2327.1	51 ----- 5446.0	75 ----- 8457.1
4 ----- 143.9	28 ----- 2448.0	52 ----- 5579.4	76 ----- 8566.7
5 ----- 200.4	29 ----- 2570.3	53 ----- 5712.7	77 ----- 8674.4
6 ----- 262.6	30 ----- 2693.8	54 ----- 5845.6	78 ----- 8780.0
7 ----- 329.8	31 ----- 2818.4	55 ----- 5978.2	79 ----- 8883.3
8 ----- 401.6	32 ----- 2944.1	56 ----- 6110.4	80 ----- 8983.3
9 ----- 477.6	33 ----- 3070.7	57 ----- 6242.1	81 ----- 9082.7
10 ----- 557.5	34 ----- 3198.3	58 ----- 6373.2	82 ----- 9178.6
11 ----- 641.0	35 ----- 3326.7	59 ----- 6503.8	83 ----- 9271.7
12 ----- 727.9	36 ----- 3455.9	60 ----- 6633.7	84 ----- 9351.7
13 ----- 817.9	37 ----- 3585.8	61 ----- 6762.9	85 ----- 9448.6
14 ----- 911.0	38 ----- 3716.4	62 ----- 6891.3	86 ----- 9532.1
15 ----- 1006.9	39 ----- 3847.5	63 ----- 7018.9	87 ----- 9612.0
16 ----- 1105.3	40 ----- 3979.2	64 ----- 7145.5	88 ----- 9688.0
17 ----- 1206.3	41 ----- 4111.4	65 ----- 7271.2	89 ----- 9759.8
18 ----- 1309.6	42 ----- 4244.0	66 ----- 7395.8	90 ----- 9827.0
19 ----- 1415.2	43 ----- 4376.9	67 ----- 7519.3	91 ----- 9889.2
20 ----- 1522.9	44 ----- 4510.2	68 ----- 7641.6	92 ----- 9945.7
21 ----- 1632.5	45 ----- 4643.6	69 ----- 7762.5	93 ----- 9959.9
22 ----- 1744.0	46 ----- 4777.3	70 ----- 7882.2	94 ----- 10038.4
23 ----- 1857.5	47 ----- 4911.0	71 ----- 8000.4	95 ----- 10071.4
24 ----- 1972.5	48 ----- 5044.8	72 ----- 8117.1	96 ----- 10089.6

at
650
78 gal per inch.

177 gal of oil = 1 Ton of coal



High Point Boiler & Tank COMPANY, INC.

STANLEY BROTHERS

2411 English Street - Phone 2-4217
HIGH POINT, NORTH CAROLINA

*BB-9
+ RR-15*

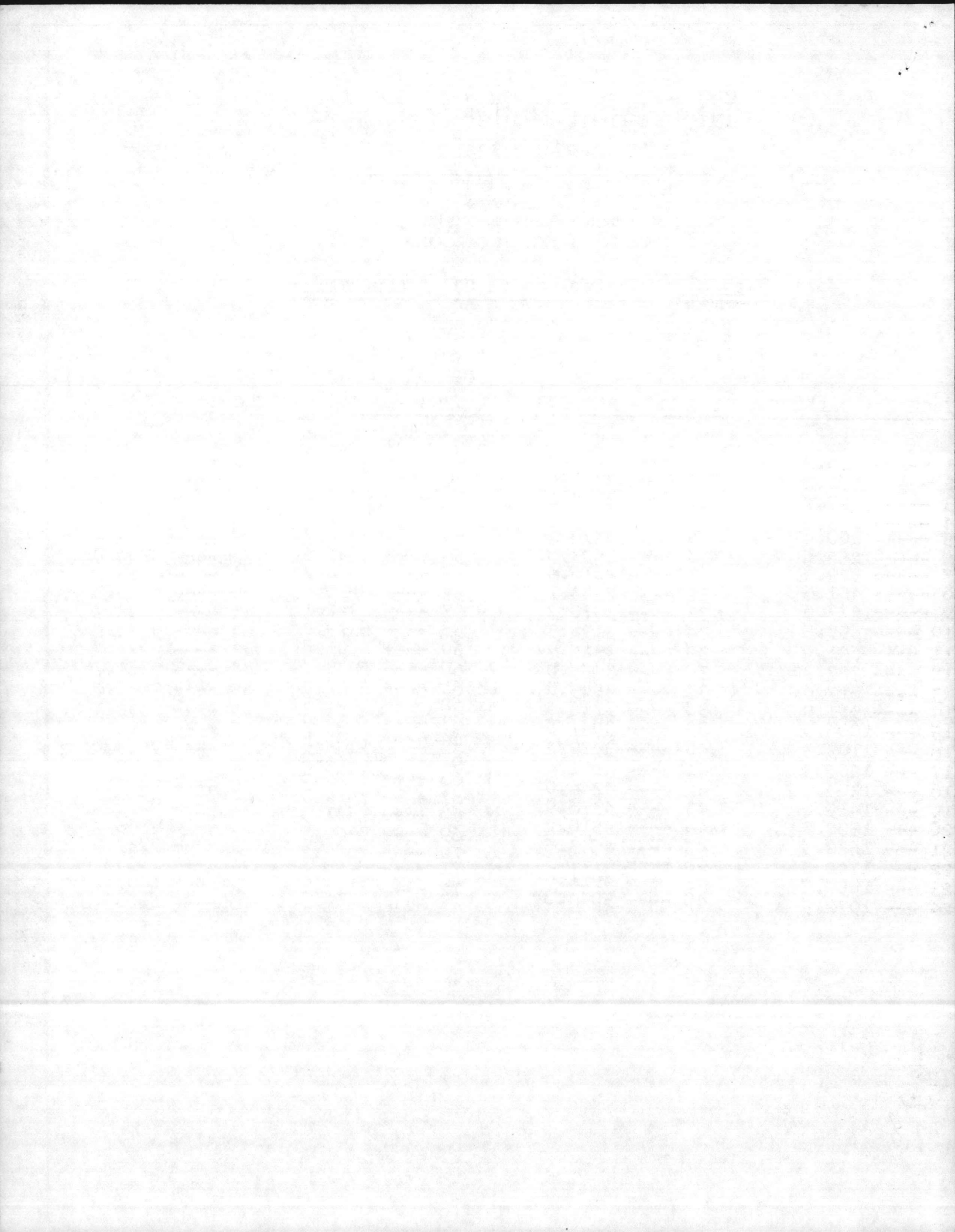
CALIBRATION CHART FOR 10,000 GALLON TANK

96" DIAMETER X 26'10" LONG

<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>
1 ----- 18.2	25 ----- 2089.2	49 ----- 5178.6	73 ----- 8232.1
2 ----- 51.2	26 ----- 2207.4	50 ----- 5312.3	74 ----- 8345.6
3 ----- 93.7	27 ----- 2327.1	51 ----- 5446.0	75 ----- 8457.1
4 ----- 143.9	28 ----- 2448.0	52 ----- 5579.4	76 ----- 8566.7
5 ----- 200.4	29 ----- 2570.3	53 ----- 5712.7	77 ----- 8674.4
6 ----- 262.6	30 ----- 2693.8	54 ----- 5845.6	78 ----- 8780.0
7 ----- 329.8	31 ----- 2818.4	55 ----- 5978.2	79 ----- 8883.3
8 ----- 401.6	32 ----- 2944.1	56 ----- 6110.4	80 ----- 8983.3
9 ----- 477.6	33 ----- 3070.7	57 ----- 6242.1	81 ----- 9082.7
10 ----- 557.5	34 ----- 3198.3	58 ----- 6373.2	82 ----- 9178.6
11 ----- 641.0	35 ----- 3326.7	59 ----- 6503.8	83 ----- 9271.7
12 ----- 727.9	36 ----- 3455.9	60 ----- 6633.7	84 ----- 9361.7
13 ----- 817.9	37 ----- 3585.8	61 ----- 6762.9	85 ----- 9448.6
14 ----- 911.0	38 ----- 3716.4	62 ----- 6891.3	86 ----- 9532.1
15 ----- 1006.9	39 ----- 3847.5	63 ----- 7018.9	87 ----- 9612.0
16 ----- 1105.3	40 ----- 3979.2	64 ----- 7145.5	88 ----- 9688.0
17 ----- 1206.3	41 ----- 4111.4	65 ----- 7271.2	89 ----- 9759.8
18 ----- 1309.6	42 ----- 4244.0	66 ----- 7395.8	90 ----- 9827.0
19 ----- 1415.2	43 ----- 4376.9	67 ----- 7519.3	91 ----- 9889.2
20 ----- 1522.9	44 ----- 4510.2	68 ----- 7641.6	92 ----- 9945.7
21 ----- 1632.5	45 ----- 4643.6	69 ----- 7762.5	93 ----- 9999.9
22 ----- 1744.0	46 ----- 4777.3	70 ----- 7882.2	94 ----- 10033.4
23 ----- 1857.5	47 ----- 4911.0	71 ----- 8000.4	95 ----- 10071.4
24 ----- 1972.5	48 ----- 5044.8	72 ----- 8117.1	96 ----- 10089.6

*tanks at
650
78 gal per inch.*

177 gals of oil = 1 Ton of coal



High Point Boiler & Tank COMPANY, INC.

STANLEY BROTHERS

2411 English Street - Phone 2-4217
HIGH POINT, NORTH CAROLINA

BB-9
+ RR-15

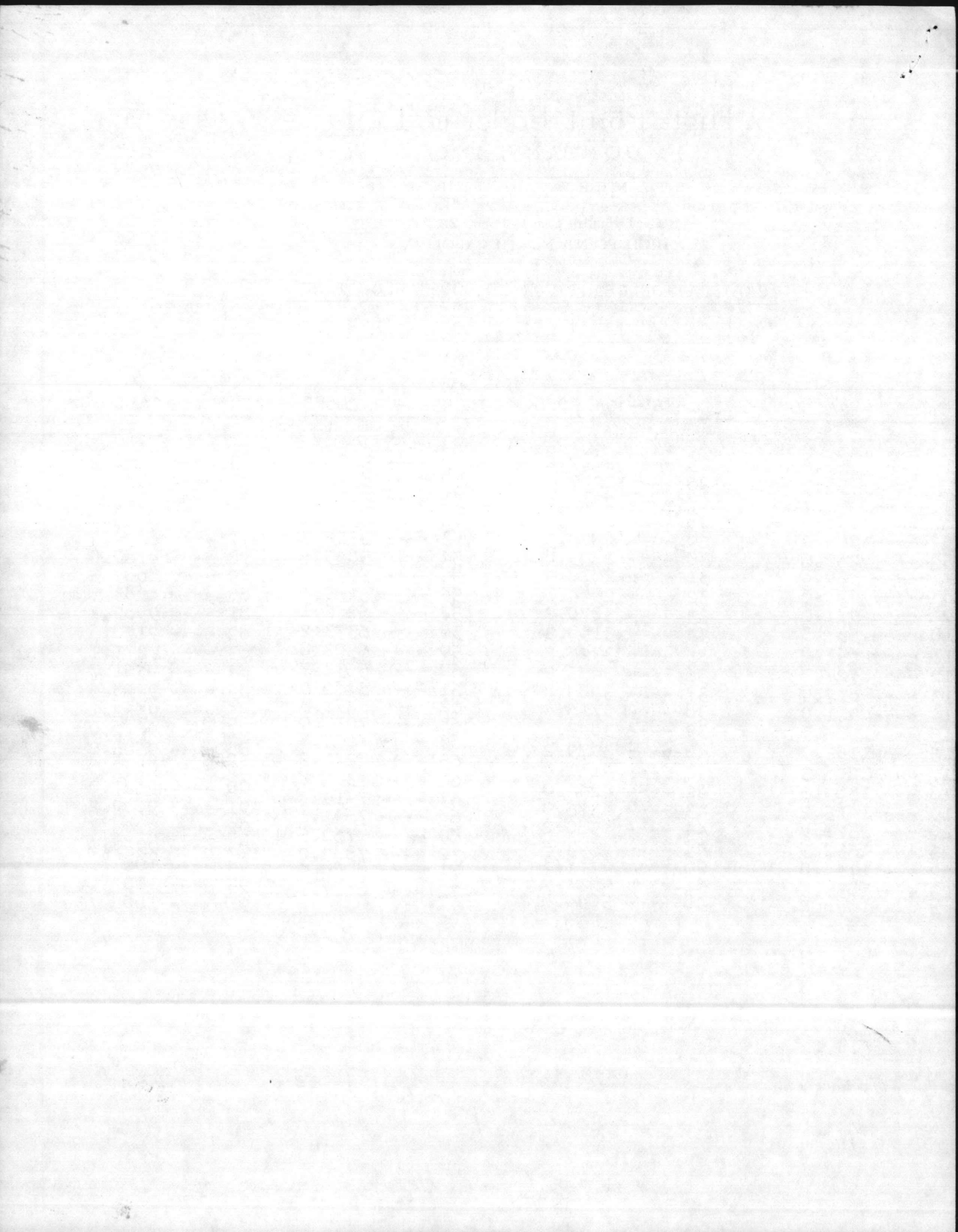
CALIBRATION CHART FOR 10,000 GALLON TANK

96" DIAMETER X 26'10" LONG

INCHES - GALLONS	INCHES - GALLONS	INCHES - GALLONS	INCHES - GALLONS
1 ----- 18.2	25 ----- 2089.2	49 ----- 5178.6	73 ----- 8232.1
2 ----- 51.2	26 ----- 2207.4	50 ----- 5312.3	74 ----- 8345.6
3 ----- 93.7	27 ----- 2327.1	51 ----- 5446.0	75 ----- 8457.1
4 ----- 143.9	28 ----- 2448.0	52 ----- 5579.4	76 ----- 8566.7
5 ----- 200.4	29 ----- 2570.3	53 ----- 5712.7	77 ----- 8674.4
6 ----- 262.6	30 ----- 2693.8	54 ----- 5845.6	78 ----- 8780.0
7 ----- 329.8	31 ----- 2818.4	55 ----- 5978.2	79 ----- 8883.3
8 ----- 401.6	32 ----- 2944.1	56 ----- 6110.4	80 ----- 8983.3
9 ----- 477.6	33 ----- 3070.7	57 ----- 6242.1	81 ----- 9082.7
10 ----- 557.5	34 ----- 3198.3	58 ----- 6373.2	82 ----- 9178.6
11 ----- 641.0	35 ----- 3326.7	59 ----- 6503.8	83 ----- 9271.7
12 ----- 727.9	36 ----- 3455.9	60 ----- 6633.7	84 ----- 9351.7
13 ----- 817.9	37 ----- 3585.8	61 ----- 6762.9	85 ----- 9448.6
14 ----- 911.0	38 ----- 3716.4	62 ----- 6891.3	86 ----- 9532.1
15 ----- 1006.9	39 ----- 3847.5	63 ----- 7018.9	87 ----- 9612.0
16 ----- 1105.3	40 ----- 3979.2	64 ----- 7145.5	88 ----- 9688.0
17 ----- 1206.3	41 ----- 4111.4	65 ----- 7271.2	89 ----- 9759.8
18 ----- 1309.6	42 ----- 4244.0	66 ----- 7395.8	90 ----- 9827.0
19 ----- 1415.2	43 ----- 4376.9	67 ----- 7519.3	91 ----- 9889.2
20 ----- 1522.9	44 ----- 4510.2	68 ----- 7641.6	92 ----- 9945.7
21 ----- 1632.5	45 ----- 4643.6	69 ----- 7762.5	93 ----- 9995.9
22 ----- 1744.0	46 ----- 4777.3	70 ----- 7882.2	94 ----- 10038.4
23 ----- 1857.5	47 ----- 4911.0	71 ----- 8000.4	95 ----- 10071.4
24 ----- 1972.5	48 ----- 5044.8	72 ----- 8117.1	96 ----- 10089.6

ankw at
650
78 gal per inch.

177 gals of oil = 1 Ton of coal



High Point Boiler & Tank COMPANY, INC.

STANLEY BROTHERS

2411 English Street - Phone 2-4217
HIGH POINT, NORTH CAROLINA

BB-9
+ RR-15

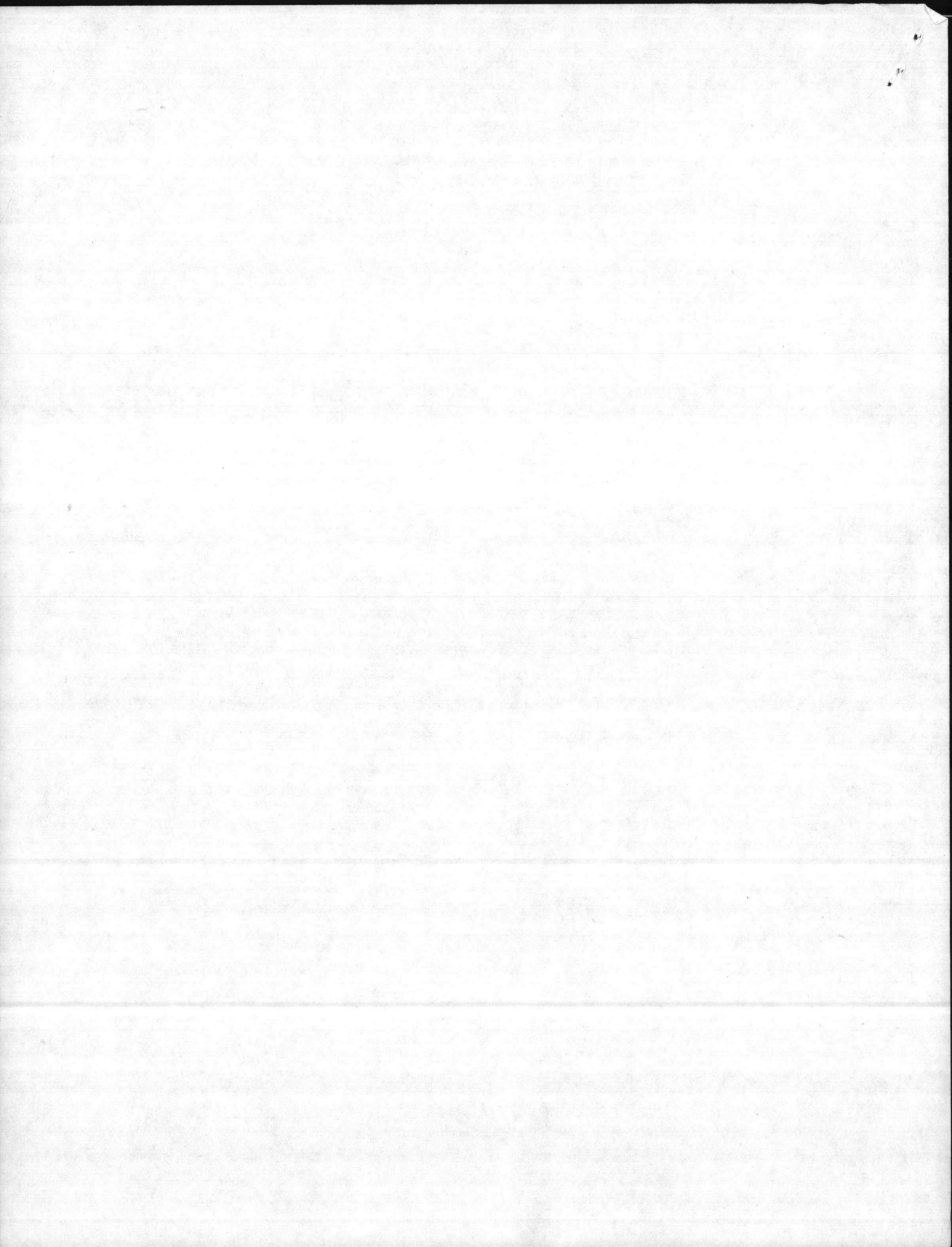
CALIBRATION CHART FOR 10,000 GALLON TANK

96" DIAMETER X 26'10" LONG

<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>
1 ----- 18.2	25 ----- 2089.2	49 ----- 5178.6	73 ----- 8232.1
2 ----- 51.2	26 ----- 2207.4	50 ----- 5312.3	74 ----- 8345.6
3 ----- 93.7	27 ----- 2327.1	51 ----- 5446.0	75 ----- 8457.1
4 ----- 143.9	28 ----- 2448.0	52 ----- 5579.4	76 ----- 8566.7
5 ----- 200.4	29 ----- 2570.3	53 ----- 5712.7	77 ----- 8674.4
6 ----- 262.6	30 ----- 2693.8	54 ----- 5845.6	78 ----- 8780.0
7 ----- 329.8	31 ----- 2818.4	55 ----- 5978.2	79 ----- 8883.3
8 ----- 401.6	32 ----- 2944.1	56 ----- 6110.4	80 ----- 8983.3
9 ----- 477.6	33 ----- 3070.7	57 ----- 6242.1	81 ----- 9082.7
10 ----- 557.5	34 ----- 3198.3	58 ----- 6373.2	82 ----- 9178.6
11 ----- 641.0	35 ----- 3326.7	59 ----- 6503.8	83 ----- 9271.7
12 ----- 727.9	36 ----- 3455.9	60 ----- 6633.7	84 ----- 9361.7
13 ----- 817.9	37 ----- 3585.8	61 ----- 6762.9	85 ----- 9448.6
14 ----- 911.0	38 ----- 3716.4	62 ----- 6891.3	86 ----- 9532.1
15 ----- 1006.9	39 ----- 3847.5	63 ----- 7018.9	87 ----- 9612.0
16 ----- 1105.3	40 ----- 3979.2	64 ----- 7145.5	88 ----- 9688.0
17 ----- 1206.3	41 ----- 4111.4	65 ----- 7271.2	89 ----- 9759.8
18 ----- 1309.6	42 ----- 4244.0	66 ----- 7395.8	90 ----- 9827.0
19 ----- 1415.2	43 ----- 4376.9	67 ----- 7519.3	91 ----- 9889.2
20 ----- 1522.9	44 ----- 4510.2	68 ----- 7641.6	92 ----- 9945.7
21 ----- 1632.5	45 ----- 4643.6	69 ----- 7762.5	93 ----- 9959.9
22 ----- 1744.0	46 ----- 4777.3	70 ----- 7882.2	94 ----- 10038.4
23 ----- 1857.5	47 ----- 4911.0	71 ----- 8000.4	95 ----- 10071.4
24 ----- 1972.5	48 ----- 5044.8	72 ----- 8117.1	96 ----- 10089.6

Tanks at
3 650
2 78 gal per inch.

177 gals of oil = 1 Ton of coal



RR15 - BB9-

10,000 Gallon Tank - 8' dia., 26'9" lgth.

Inches	Gallons
3	94
6	262
9	476
12	726
15	1,004
18	1,306
21	1,627
24	1,967
27	2,320
30	2,685
33	3,061
36	3,445
39	3,836
42	4,231
45	4,629
48	5,029
51	5,429
54	5,817
57	6,212
60	6,593
63	6,997
66	7,353
69	7,718
72	8,071
75	8,411
78	8,732
81	9,034
84	9,312
87	9,562
90	9,776
93	9,944
96	10,038

2 Copies } BB⁹ Bailey room
 } RR¹ Bailey room.

10,000 Gallon Tank - 31 1/2" dia. x 33 1/2" high

Gallons Inches

10,000	33 1/2
9,900	33 1/4
9,800	33 1/8
9,700	33 1/16
9,600	33
9,500	32 31/16
9,400	32 3/4
9,300	32 3/8
9,200	32 3/16
9,100	32 1/4
9,000	32 1/8
8,900	32 1/16
8,800	32
8,700	31 31/16
8,600	31 3/4
8,500	31 3/8
8,400	31 3/16
8,300	31 1/4
8,200	31 1/8
8,100	31 1/16
8,000	31
7,900	30 31/16
7,800	30 3/4
7,700	30 3/8
7,600	30 3/16
7,500	30 1/4
7,400	30 1/8
7,300	30 1/16
7,200	30
7,100	29 31/16
7,000	29 3/4
6,900	29 3/8
6,800	29 3/16
6,700	29 1/4
6,600	29 1/8
6,500	29 1/16
6,400	29
6,300	28 31/16
6,200	28 3/4
6,100	28 3/8
6,000	28 3/16
5,900	28 1/4
5,800	28 1/8
5,700	28 1/16
5,600	28
5,500	27 31/16
5,400	27 3/4
5,300	27 3/8
5,200	27 3/16
5,100	27 1/4
5,000	27 1/8
4,900	27 1/16
4,800	27
4,700	26 31/16
4,600	26 3/4
4,500	26 3/8
4,400	26 3/16
4,300	26 1/4
4,200	26 1/8
4,100	26 1/16
4,000	26
3,900	25 31/16
3,800	25 3/4
3,700	25 3/8
3,600	25 3/16
3,500	25 1/4
3,400	25 1/8
3,300	25 1/16
3,200	25
3,100	24 31/16
3,000	24 3/4
2,900	24 3/8
2,800	24 3/16
2,700	24 1/4
2,600	24 1/8
2,500	24 1/16
2,400	24
2,300	23 31/16
2,200	23 3/4
2,100	23 3/8
2,000	23 3/16
1,900	23 1/4
1,800	23 1/8
1,700	23 1/16
1,600	23
1,500	22 31/16
1,400	22 3/4
1,300	22 3/8
1,200	22 3/16
1,100	22 1/4
1,000	22 1/8
900	22 1/16
800	22
700	21 31/16
600	21 3/4
500	21 3/8
400	21 3/16
300	21 1/4
200	21 1/8
100	21 1/16
0	21



17 July 1957

CALIBRATION CHART FOR 10,000 GALLON TANK

96" DIAMETER X 26' 10" LONG

RR-15

BB-9
RR⁺-15

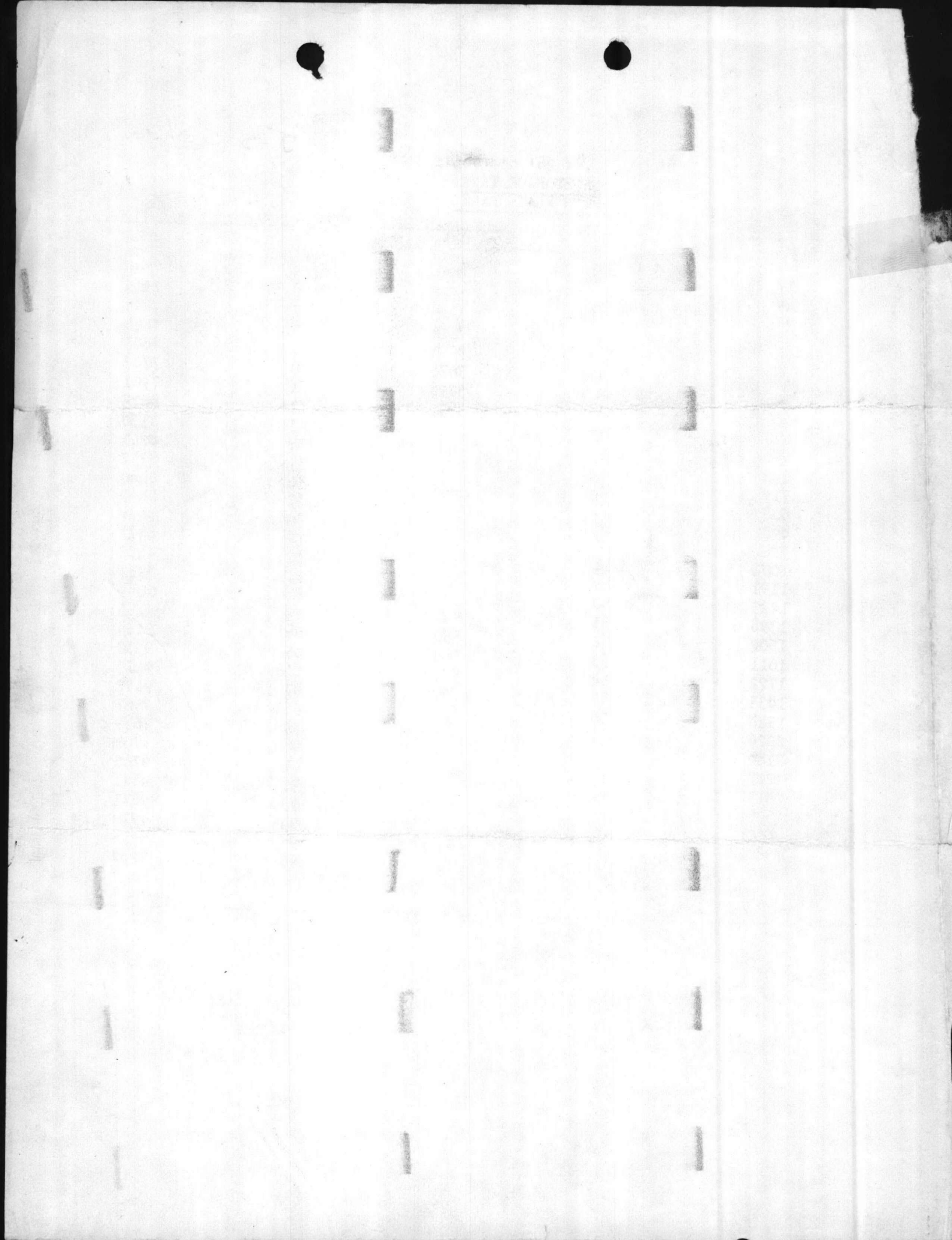
<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>	<u>INCHES - GALLONS</u>
1 - - - 18.2	25 - - - 2089.2	49 - - - 5178.6	73 - - - 8232.1
2 - - - 51.2	26 - - - 2207.4	50 - - - 5312.3	74 - - - 8345.6
3 - - - 93.7	27 - - - 2327.1	51 - - - 5446.0	75 - - - 8457.1
4 - - - 143.9	28 - - - 2448.0	52 - - - 5579.4	76 - - - 8566.7
5 - - - 200.4	29 - - - 2570.3	53 - - - 5712.7	77 - - - 8674.4
6 - - - 262.6	30 - - - 2693.8	54 - - - 5845.6	78 - - - 8780.0
7 - - - 329.8	31 - - - 2818.4	55 - - - 5978.2	79 - - - 8883.3
8 - - - 401.6	32 - - - 2944.1	56 - - - 6110.4	80 - - - 8983.3
9 - - - 477.6	33 - - - 3070.7	57 - - - 6242.1	81 - - - 9082.7
10 - - 557.5	34 - - - 3198.3	58 - - - 6373.2	82 - - - 9178.6
11 - - 641.0	35 - - - 3326.7	59 - - - 6503.8	83 - - - 9271.7
12 - - 727.9	36 - - - 3455.9	60 - - - 6633.7	84 - - - 9361.7
13 - - 817.9	37 - - - 3585.8	61 - - - 6762.9	85 - - - 9448.6
14 - - 911.0	38 - - - 3716.4	62 - - - 6891.3	86 - - - 9532.1
15 - - 1006.9	39 - - - 3847.5	63 - - - 7018.9	87 - - - 9612.0
16 - - 1105.3	40 - - - 3979.2	64 - - - 7145.5	88 - - - 9688.0
17 - - 1206.3	41 - - - 4111.4	65 - - - 7271.2	89 - - - 9759.8
18 - - 1309.6	42 - - - 4244.0	66 - - - 7395.8	90 - - - 9827.0
19 - - 1415.2	43 - - - 4376.9	67 - - - 7519.3	91 - - - 9889.2
20 - - 1522.9	44 - - - 4510.2	68 - - - 7641.6	92 - - - 9945.7
21 - - 1632.5	45 - - - 4643.6	69 - - - 7762.5	93 - - - 9999.9
22 - - 1744.0	46 - - - 4777.3	70 - - - 7882.2	94 - - - 10038.4
23 - - 1857.5	47 - - - 4911.0	71 - - - 8000.4	95 - - - 10071.4
24 - - 1972.5	48 - - - 5044.8	72 - - - 8117.1	96 - - - 10089.6



J-S school

8' 0" dia. x 26' 6" (96" x 318")
BULK STORAGE TANK
WITH FLAT HEADS

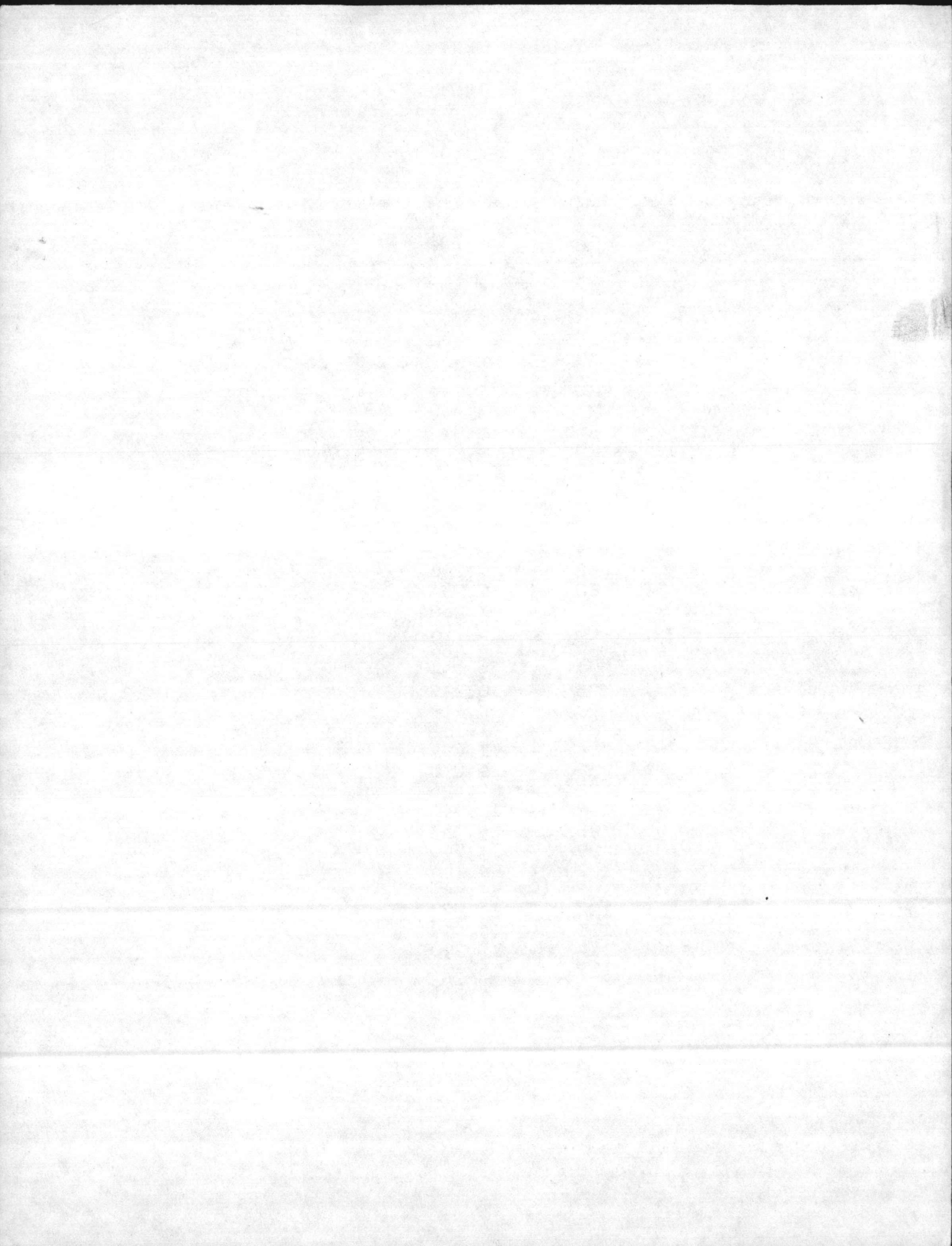
In.	Gal.	In.	Gal.	In.	Gal.
	17	33	3032	65	7180
1	49	34	3158	66	7303
2	92	35	3285	67	7425
3	142	36	3412	68	7546
4	197	37	3541	69	7665
5	259	38	3670	70	7783
6	324	39	3798	71	7901
7	396	40	3929	72	8015
8	470	41	4059	73	8130
9	550	42	4191	74	8241
10	633	43	4322	75	8352
11	719	44	4454	76	8460
12	808	45	4586	77	8565
13	898	46	4718	78	8670
14	994	47	4849	79	8772
15	1091	48	4981	80	8872
16	1191	49	5113	81	8969
17	1293	50	5245	82	9065
18	1398	51	5377	83	9155
19	1502	52	5509	84	9244
20	1611	53	5641	85	9330
21	1722	54	5772	86	9413
22	1833	55	5904	87	9492
23	1948	56	6034	88	9567
24	2026	57	6164	89	9639
25	2180	58	6293	90	9704
26	2297	59	6422	91	9766
27	2417	60	6551	92	9821
28	2538	61	6678	93	9871
29	2660	62	6805	94	9914
30	2782	63	6931	95	9945
31	2907	64	7056	96	9962
32					

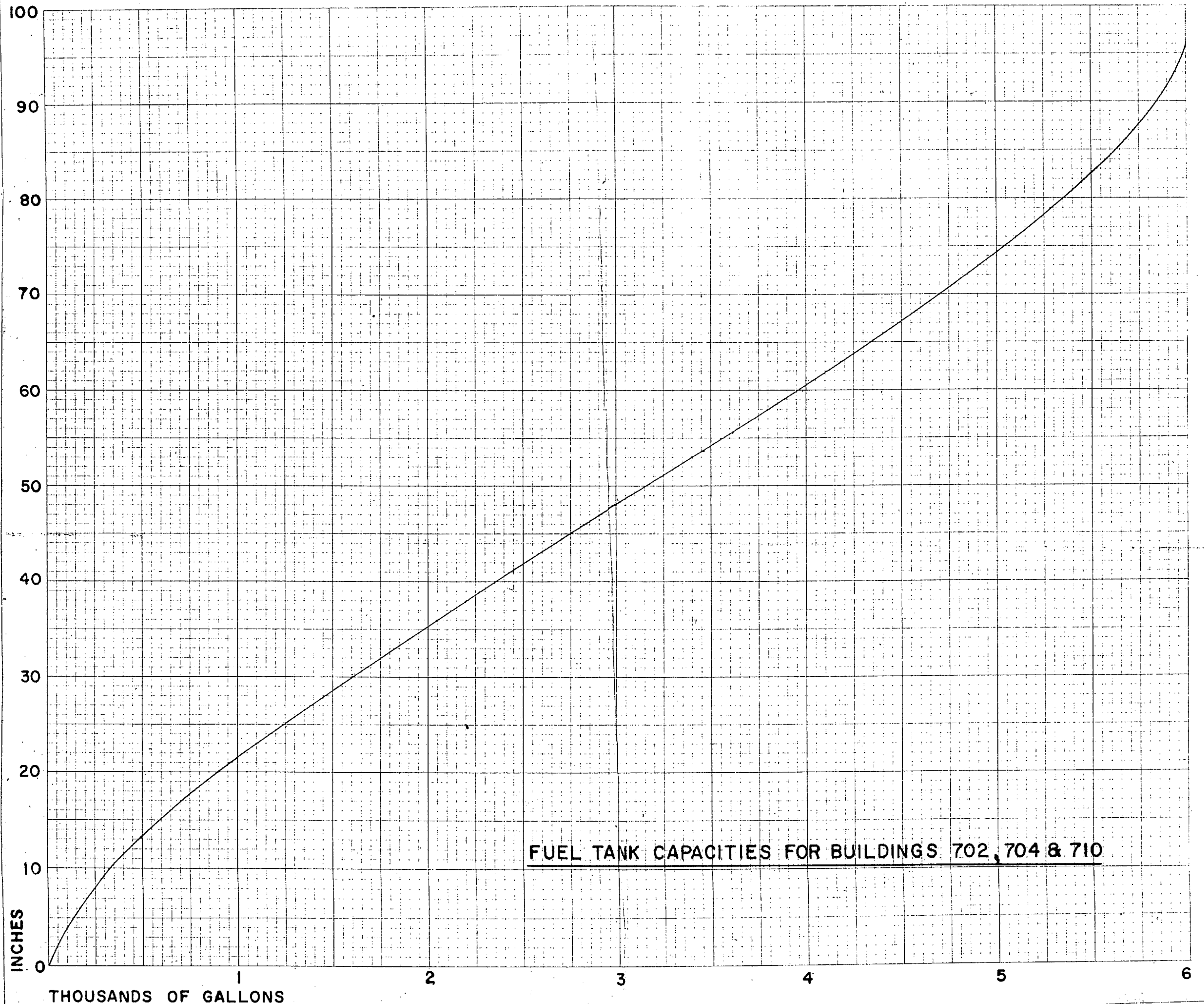


M-230
M-230

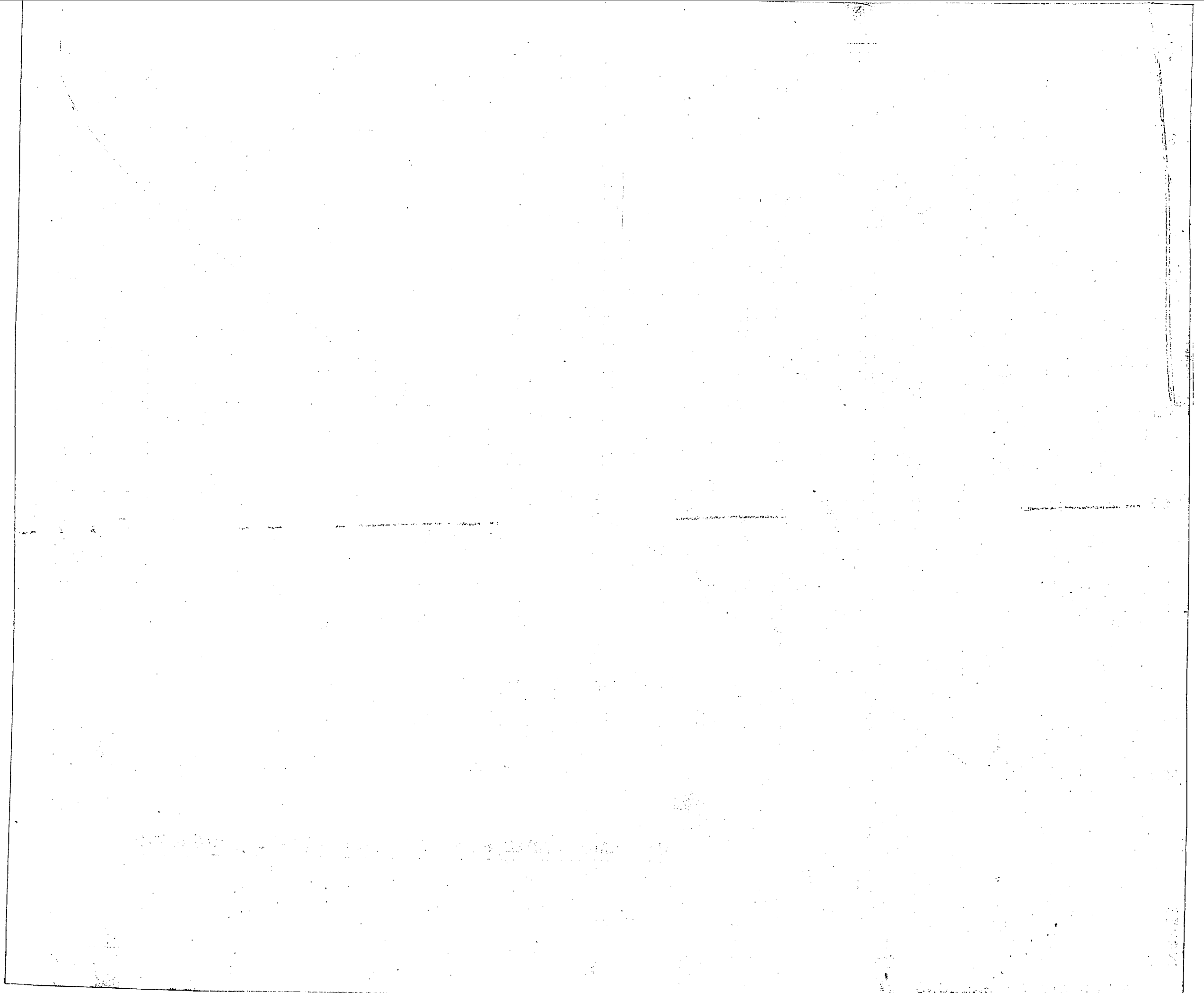
Capacity in Gallons for a Tank, 15,000 gal., 10' dia. 26'6" lgth.

<i>inches</i>		<i>gals.</i>
3	-	104
6	-	291
9	-	531
12	-	810
15	-	1,123
18	-	1,464
21	-	1,830
24	-	2,217
27	-	2,622
30	-	3,044
33	-	3,480
36	-	3,929
39	-	4,388
42	-	4,857
45	-	5,333
48	-	5,816
51	-	6,304
54	-	6,795
57	-	7,290
60	-	7,786
63	-	8,280
66	-	8,775
69	-	9,266
72	-	9,754
75	-	10,237
78	-	10,713
81	-	11,182
84	-	11,641
87	-	12,090
90	-	12,526
93	-	12,948
96	-	13,353
99	-	13,740
102	-	14,106
105	-	14,447
108	-	14,770
111	-	15,049
114	-	15,290
117	-	15,477
120	-	15,581





FUEL TANK CAPACITIES FOR BUILDINGS 702, 704 & 710



~~BA-106~~

BA-106

BUFFALO TANK CORPORATION
BALTIMORE, MARYLAND

CALIBRATION CHART
10'-0" DIA. X 17'0 $\frac{1}{2}$ " SHELL
FLAT HEADS

FF-10120

<u>INCHES</u>	<u>GALLONS</u>	<u>INCHES</u>	<u>GALLONS</u>	<u>INCHES</u>	<u>GALLONS</u>	<u>INCHES</u>	<u>GALLONS</u>
1	13	31	2064	61	5147	91	8201
2	36	32	2158	62	5254	92	8292
3	67	33	2253	63	5362	93	8382
4	103	34	2349	64	5467	94	8471
5	144	35	2446	65	5575	95	8558
6	188	36	2543	66	5680	96	8645
7	237	37	2642	67	5787	97	8730
8	288	38	2741	68	5893	98	8813
9	343	39	2841	69	5999	99	8895
10	401	40	2941	70	6105	100	8976
11	462	41	3042	71	6210	101	9055
12	525	42	3144	72	6315	102	9132
13	590	43	3246	73	6419	103	9207
14	657	44	3349	74	6523	104	9281
15	727	45	3453	75	6627	105	9353
16	799	46	3556	76	6731	106	9422
17	872	47	3660	77	6834	107	9490
18	948	48	3765	78	6936	108	9555
19	1025	49	3870	79	7038	109	9618
20	1104	50	3975	80	7139	110	9679
21	1185	51	4081	81	7239	111	9736
22	1267	52	4187	82	7339	112	9791
23	1350	53	4293	83	7438	113	9843
24	1435	54	4399	84	7537	114	9892
25	1521	55	4506	85	7634	115	9936
26	1609	56	4612	86	7731	116	9977
27	1698	57	4719	87	7827	117	10013
28	1788	58	4826	88	7922	118	10043
29	1878	59	4933	89	8016	119	10067
30	1971	60	5040	90	8109	120	10080

The above is an average table only and not theoretically correct. Do not use on mechanical gauging devices.

10,000 gallon tank - 8' dia., 26'9"lgth

BA 106

<u>Inches</u>	<u>gallons</u>
3	94
4	106
5	226
6	262
7	333
8	404
9	476
10	559
11	642
12	726
13	818
14	910
15	1004
16	1105
17	1206
18	1306
19	1415
20	1520
21	1627
22	1741
23	1854
24	1967
25	2084
26	2202
27	2321
28	2442
29	2564
30	2685
31	2810
32	2935
33	3061
34	3189
35	3317
36	3445
37	3575
38	3705
39	3836
40	3968
41	4100
42	4231
43	4363
44	4496
45	4629
46	4762
47	4895
48	5029
49	5162
50	5295

<u>Inches</u>	<u>gallons</u>
51	5429
52	5558
53	5687
54	5817
55	5945
56	6073
57	6212
58	6339
59	6465
60	6593
61	6727
62	6861
63	6997
64	7115
65	7234
66	7353
67	7475
68	7599
69	7718
70	7836
71	7954
72	8071
73	8185
74	8298
75	8411
76	8518
77	8625
78	8732
79	8833
80	8934
81	9034
82	9127
83	9220
84	9312
85	9396
86	9479
87	9562
88	9634
89	9705
90	9776
91	9832
92	9888
93	9944
94	9976
95	10,007
96	10,038

10,000 gallon tank - 8' dia., 26'9"lgth

BA106

<u>Inches</u>	<u>gallons</u>
3	94
4	106
5	226
6	262
7	333
8	404
9	476
10	559
11	642
12	726
13	818
14	910
15	1004
16	1105
17	1206
18	1306
19	1415
20	1520
21	1627
22	1741
23	1854
24	1967
25	2084
26	2202
27	2321
28	2442
29	2564
30	2685
31	2810
32	2935
33	3061
34	3189
35	3317
36	3445
37	3575
38	3705
39	3836
40	3968
41	4100
42	4231
43	4363
44	4496
45	4629
46	4762
47	4895
48	5029
49	5162
50	5295

<u>Inches</u>	<u>gallons</u>
51	5429
52	5558
53	5687
54	5817
55	5945
56	6073
57	6212
58	6339
59	6465
60	6593
61	6727
62	6861
63	6997
64	7115
65	7234
66	7353
67	7475
68	7599
69	7718
70	7836
71	7954
72	8071
73	8185
74	8298
75	8411
76	8518
77	8625
78	8732
79	8833
80	8934
81	9034
82	9127
83	9220
84	9312
85	9396
86	9479
87	9562
88	9634
89	9705
90	9776
91	9832
92	9888
93	9944
94	9976
95	10,007
96	10,038

PARIS

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M-230
M-230

Capacity in Gallons for a Tank, 15,000 gal., 10' dia. 26'6" lgth.

<i>inches</i>		<i>gals.</i>
3	-	104
6	-	291
9	-	531
12	-	810
15	-	1,123
18	-	1,464
21	-	1,830
24	-	2,217
27	-	2,622
30	-	3,044
33	-	3,480
36	-	3,929
39	-	4,388
42	-	4,857
45	-	5,333
48	-	5,816
51	-	6,304
54	-	6,795
57	-	7,290
60	-	7,786
63	-	8,280
66	-	8,775
69	-	9,266
72	-	9,754
75	-	10,237
78	-	10,713
81	-	11,182
84	-	11,641
87	-	12,090
90	-	12,526
93	-	12,948
96	-	13,353
99	-	13,740
102	-	14,106
105	-	14,447
108	-	14,770
111	-	15,049
114	-	15,290
117	-	15,477
120	-	15,581

Capacity in Gallons for a Tank 15,000 gal. 10' dia. 20' h. 1971.



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