

Technical drawing of a staircase, showing plan and elevation views with dimensions and annotations.

**Plan View (Top):**

- Line 152: 4 P1  $\varnothing$  20 C=420
- Line 152: 7 P12  $\varnothing$  20 C=325 (4  $\varnothing$  20CAM, 3  $\varnothing$  30CAM)
- Line 171: 2 P2  $\varnothing$  10 C=525
- Line 210: 2 P3  $\varnothing$  10 C=245
- Line 270: 28  $\varnothing$  8 C/10 P11 (498)
- Line 32: 32  $\varnothing$  8 C/10 P11 (305)
- Line 172: 17  $\varnothing$  8 C/20 P11 (140)
- Line 140: 8x2 P9  $\varnothing$  8 C=230
- Line 100: 4 P7  $\varnothing$  6.3 C=125
- Line 125: 3 P5  $\varnothing$  20 C=240
- Line 994: 3 P4  $\varnothing$  20 C=710
- Line 1038: 3 P6  $\varnothing$  20 C=1038

**Elevation View (Bottom):**

- Line 152: 4 P1  $\varnothing$  20 C=420
- Line 171: 2 P2  $\varnothing$  10 C=525
- Line 210: 2 P3  $\varnothing$  10 C=245
- Line 270: 28  $\varnothing$  8 C/10 P11 (498)
- Line 32: 32  $\varnothing$  8 C/10 P11 (305)
- Line 172: 17  $\varnothing$  8 C/20 P11 (140)
- Line 140: 8x2 P9  $\varnothing$  8 C=230
- Line 100: 4 P7  $\varnothing$  6.3 C=125
- Line 125: 3 P5  $\varnothing$  20 C=240
- Line 994: 3 P4  $\varnothing$  20 C=710
- Line 1038: 3 P6  $\varnothing$  20 C=1038

**Annotations:**

- 27/70
- 27/VAR
- (costeira)
- 100
- 125
- 140
- 171
- 210
- 270
- 32
- 172
- 994
- 1038
- 57
- (2  $\varnothing$  20CAM)
- C=VAR (011)

[illegible]

Technical drawing of a staircase showing plan and elevation views with dimensions and reinforcement details.

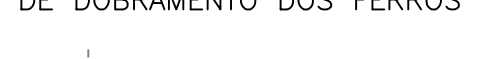
**Plan View (Top):**

- Overall width: 152
- Reinforcement: 2 P1  $\phi$  16 C=1077
- Staircase width: 8x2 P6  $\phi$  8 C=230
- Staircase length: 140
- Staircase slope: 27/70
- Staircase width: 3  $\phi$  5 C/10
- Staircase length: 157
- Staircase width: P7

**Elevation View (Bottom):**

- Overall height: 40
- Staircase width: 27/70
- Staircase length: 28  $\phi$  5 C/13
- Staircase width: P8(331)
- Staircase length: 126
- Staircase width: (costela)
- Staircase length: 2x7 P4  $\phi$  6.3 C=125
- Staircase width: 100
- Staircase length: 2 P2  $\phi$  16 C=240
- Staircase width: 994
- Staircase length: 2 P3  $\phi$  16 C=1029
- Staircase width: 247 P5  $\phi$  6.3
- Staircase length: VAR
- Staircase width: C=VAR
- Staircase length: (911)
- Staircase width: M6/M7
- Staircase length: P41/P42
- Staircase width: M  $\phi$  5 C/13
- Staircase length: P6 (560)

| RESUMO AÇO CA 50-60 |             |              |              |
|---------------------|-------------|--------------|--------------|
| AÇO                 | BIT<br>(mm) | COMPR<br>(m) | PESO<br>(kg) |
| 50                  | 6,3         | 4641         | 1160         |
| 50                  | 8           | 7298         | 2919         |
| 50                  | 10          | 168          | 106          |
| 50                  | 16          | 829          | 1327         |
| 50                  | 20          | 1587         | 3968         |
| Peso Total          |             | 50 =         | 9479 kg      |

| DETALHE DE DOBRAMENTO DOS FERROS                                                      | $\emptyset$ | RAIO (cm) | DESCONTO(cm) |
|---------------------------------------------------------------------------------------|-------------|-----------|--------------|
|  | 10,0        | 7,5       | 3,0          |
|                                                                                       | 12,5        | 9,3       | 4,0          |
|                                                                                       | 16,0        | 12,0      | 5,0          |
|                                                                                       | 20,0        | 15,0      | 6,0          |
|                                                                                       | 25,0        | 18,5      | 8,0          |

ingest

| OBRA                                      |                    | GINÁSIO DE ESPORTES |            | (PREFEITURA DE LIMOIEIRO)                                                                              |  |
|-------------------------------------------|--------------------|---------------------|------------|--------------------------------------------------------------------------------------------------------|--|
| 01/2017                                   | RESP. TÉCNICO      | AÇO                 | ESCALA     | <div style="font-size: 48px; text-align: center;">P</div> <div style="text-align: center;">04/04</div> |  |
|                                           | GAMAL ASSURFA      | CA= 50 e 60         | 1:50       |                                                                                                        |  |
|                                           | PROJETO ESTRUTURAL | CONCRETO            | DATA       |                                                                                                        |  |
|                                           | DESENHO            | fck > 35 MPa        | ABRIL/2017 |                                                                                                        |  |
|                                           | AMARO CORTEZ       | ARQUIVO             | REVISÃO    |                                                                                                        |  |
|                                           |                    | P04-04.DWG          | 0          |                                                                                                        |  |
| NÍVEL 1 - ARMAÇÃO DAS VIGAS (PARTE 04/04) |                    |                     |            |                                                                                                        |  |