

**ANALISIS KESEIMBANGAN *WATER DISPENSER ASSEMBLY*
LINE MENGGUNAKAN *METODE RANKED POSITIONAL*
WEIGHT, REGION APPROACH, DAN LARGEST CANDIDATE
RULE DI PT. PANASONIC MANUFACTURING INDONESIA**

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ABSTRAK

PT. Panasonic Manufacturing Indonesia merupakan salah satu perusahaan produsen barang elektronik terbesar di Indonesia yang menghasilkan beberapa produk elektronik, salah satunya *water dispenser*. Melihat dari grafik selama kurun waktu 6 bulan terakhir, tingkat *line efficiency* di lintasan perakitan tersebut di bawah standar perusahaan dan terdapat beberapa stasiun kerja yang *bottleneck*. Oleh karena itu, diperlukan analisis terkait pemerataan lintasan perakitan *water dispenser* untuk dapat mencapai standar perusahaan. Untuk mendukung analisis tersebut, perlu dilakukan uji kecukupan data, keseragaman data, dan perhitungan waktu baku dalam proses perakitan. Kemudian, menggunakan metode *Ranked Positional Weight, Region Approach, dan Largest Candidate Rule* untuk menganalisis keseimbangan lintasannya. Berdasarkan hasil pengolahan data, kondisi aktual *line efficiency* mencapai 121,41% dan *balance delay* sebesar -21,41% dimana hal tersebut menggambarkan banyaknya stasiun kerja yang mengalami *bottleneck* dengan kondisi awal sebanyak 14 stasiun kerja. Setelah dianalisis menggunakan metode RPW, RA dan LCR diperoleh nilai *line efficiency* sebesar 80,9% dan *balance delay* sebesar 19,1%. Sedangkan, untuk *smoothness index* metode RPW dan LCR sebesar 145,715 detik dan RA sebesar 145,790 detik dengan penambahan sebanyak 21 stasiun kerja.

Kata Kunci: *Water Dispenser, Keseimbangan Lintasan, Bottleneck*

**BALANCED ANALYSIS OF WATER DISPENSER ASSEMBLY
LINE USING RANKED POSITIONAL WEIGHT, REGION
APPROACH, AND LARGEST CANDIDATE RULE METHODS
AT PT. PANASONIC MANUFACTURING INDONESIA**

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ABSTRACT

PT. Panasonic Manufacturing Indonesia is one of the largest electronic goods manufacturers in Indonesia which produces several electronic products, one of which is a water dispenser. Looking at the graphs for the last 6 months, the level of line efficiency in the assembly line is below the company's standard and there are several work stations that are bottlenecks. Therefore, an analysis is needed regarding the even distribution of the water dispenser assembly line in order to achieve company standards. To support this analysis, it is necessary to test data adequacy, data uniformity, and standard time calculations in the assembly process. Then, using the Ranked Positional Weight, Region Approach, and Largest Candidate Rule methods to analyze the balance of the track. Based on the results of data processing, the actual condition of line efficiency reached 121.41% with a balance delay of -21.41% which illustrates the number of work stations experiencing bottlenecks with an initial condition of 14 work stations. After being analyzed using the RPW, RA, and LCR methods, an increase in line efficiency of 80.9% and a balance delay of 19.1% was obtained. Meanwhile, the smoothness index for the RPW and LCR methods was 145.715 seconds and RA 145.790 seconds with the addition of 21 work stations.

Keywords: *Water Dispenser, Line Balancing, Bottleneck*