



PRODUCTION ORDER COSTING SYSTEM MANAGEMENT: AN EMPIRICAL STUDY

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Abstract

This work aims to analyze the management of the production order cost system applied to the manufacturing process of aluminum polychloride in the company CYSQUIMICA", located in the city of Cúcuta, Colombia. The research employs a quantitative approach and is developed under a non-experimental transectional type of research. A questionnaire was designed and applied to three employees to describe the production processes and the cost system by process orders. The results show that adjusting the cost system is necessary to improve the production process. It is concluded that updating the cost system will allow managers to make the right management decisions to improve the company's profitability and competitiveness.

Palabras Claves. Costing system; Production order system; Aluminum Polychloride

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GESTIÓN DEL SISTEMA DE COSTOS POR ÓRDENES DE PRODUCCIÓN: ESTUDIO EMPÍRICO

Resumen:

Este trabajo tiene por objetivo analizar la gestión del sistema de costos por órdenes de producción aplicado al proceso de fabricación del policloruro de aluminio en la empresa CYSQUIMICA", ubicada en la ciudad de Cúcuta, Colombia. La investigación emplea un enfoque cuantitativo y se desarrolla bajo un tipo de investigación no experimental transeccional. Al respecto, se diseña un cuestionario el cual se aplica a tres funcionarios para describir los procesos productivos y el sistema de costos por órdenes de proceso. Los resultados evidencian que es necesario ajustar el sistema de costos a fin de mejorar el proceso de producción. Se concluye que la actualización del sistema de costos permitirá a los directivos tomar decisiones gerenciales acertadas de cara a mejorar la rentabilidad y competitividad de la empresa.

Keywords. Sistema de costos; Sistema de órdenes de producción; Policloruro de aluminio.

GERENCIAMENTO DO SISTEMA DE CUSTEIO DE PEDIDOS: UM ESTUDO EMPÍRICO EMPÍRICO

Resumo:

O objetivo deste trabalho é analisar a gestão do sistema de custos de ordens de produção aplicado ao processo de fabricação de policloreto de alumínio na empresa CYSQUIMICA", localizada na cidade de Cúcuta, Colômbia. A pesquisa utiliza uma abordagem quantitativa e é desenvolvida sob um tipo de pesquisa transeccional não experimental. Um questionário foi elaborado e aplicado a três funcionários para descrever os processos de produção e o sistema de custos por ordens de processo. Os resultados mostram que é necessário ajustar o sistema de custos para melhorar o processo de produção. Conclui-se que a atualização do sistema de custos permitirá que os gerentes tomem as decisões gerenciais corretas para melhorar a lucratividade e a competitividade da empresa.

Palabras chave. Sistema de cálculo de custos; Sistema de ordens de produção; Policloreto de alumínio

1. INTRODUCTION:

Currently, most organizations focus their efforts on improving their efficiency levels by making informed decisions, which are supported by tools that, when used, allow both an increase in productivity and a reduction in the costs established within the production area (Andrade-Navia, Ramírez-Plazas & Fierro-Celis, 2023). A fundamental tool to achieve these objectives is the cost system, which is an essential tool in business management to analyze the costs associated with the production of goods or services (Navarro, Mena, Otalora, Hurtado, Trejos, 2023). This system provides detailed information on how fees are generated at each stage of the production process, allowing companies to better understand their costs and make informed decisions to improve efficiency and profitability (Monasterio-Pérez & Rincón-Soto, 2023).

Job order costing systems are valuable tools for organizations seeking to improve efficiency, control costs, and increase profitability in today's competitive marketplace (Eslava-Zapata, Parra-González & Chacón-Guerrero, 2022). By enabling more accurate management of resources and a better understanding of production costs, these tools can help companies achieve their financial and operational goals (Fátima & Ali, 2023).

In this sense, CYSQUIMICA, a company that produces and commercializes aluminium polychloride, a chemical input used in the potabilization of water and treatment of industrial and urban wastewater, is no exception because, in the search to improve its business management and make better decisions, The company faces several challenges in terms of resource management, as well as in terms of the documentary management of cost elements (Sánchez-Escalante, 2021).

Although the company is aware of the cost elements and has information about them, the system is not being used correctly, which makes it difficult for managers to determine actual costs, identify areas for improvement, optimize processes, reduce costs, make

the right decisions in terms of pricing and budgeting (Buys & Nel, 2021).

The objective of this article was to analyze the management of the cost system by production orders applied to the manufacturing process of aluminium polychloride in the company CYSQUIMICA". In this regard, a questionnaire was designed and used by three employees to describe the production processes that are part of the manufacturing line of aluminium polychloride and the cost system by process orders in order to establish actions to improve the cost system and decision-making.

2. LITERATURE REVIEW:

Cost systems

The cost system in the productive area plays a fundamental role in the development of both the industrial and commercial activities of the companies. From the costs of the products, it is possible to establish a selling price that allows the generation of profits and to compete in the market (Arias-Suárez & Cano-Mejía, (2021).

Cost systems facilitate the determination of unit costs of the items produced or services rendered through records and reports structured on accounting theory. They also reduce the management and administration of inventory, since by knowing the precise data of the inputs required for the production of a product, it is possible to know the inputs needed for the production of a certain number of units, the personnel necessary for the development of this specific activity and the production time (Díaz-Ortega, Maestre-Delgado & Díaz-Ortega, 2022).

A cost system is an information system with which the cost is incurred in carrying out a production process. The way it is generated in each of the activities in which production is developed is determined. From there, both productive and administrative improvements can

be made, which tends to better optimize output (Labro, 2019).

It should be noted that a cost system is not only used in the company's internal decisions but is also used as a means to comply with external commitments such as legal and tax obligations. Therefore, the cost system is fundamental to providing accurate and reliable information to feed a company's financial accounting. This information is crucial for decision-making, performance evaluation and financial planning. If the information recorded in the cost system is not accurate or specific, it can lead to erroneous decisions that negatively affect the profitability and economic health of the company. Therefore, it is essential to establish and maintain adequate controls to ensure the accuracy and integrity of the data in the cost system. This includes implementing appropriate policies and procedures, training personnel responsible for entering and maintaining information in the system, and conducting periodic audits to verify data integrity (Ruiz-Molina & Carnevali-García, 2021).

In this context, cost systems are fundamental tools for business management since they allow the analysis of production costs and operating costs of the company, which are the basis for its operation, and which, being so important, require continuous updating taking into account the constant increases and variations that bring with them some inputs, labour wages, among other factors (Budiño & Asuaga, 2022).

Cost systems are essential tools for management in all areas of a company. They allow a better understanding of the costs associated with the production of goods or the provision of services, which in turn facilitates informed decision-making. By implementing an effective and accurate costing system, companies can more clearly assess their financial performance, identify areas for improvement in operational efficiency, and determine strategies to maximize profitability. In short, a sound costing system is critical to the effective management of any business (Pérez-Guedes & Arufe-Padrón, 2023).

Production order costing system

The Production Order Costing System is an accounting methodology used by companies to calculate the production cost of specific units or batches of products. It allows assigning direct and indirect costs to each production order, which facilitates control and management decision-making. It also allows companies to maximize profits, maintain a sustainable operation and make informed decisions based on proper resource allocation and cost control (Daowadueng, Hoozée, Jorissen & Maussen, 2023).

Production costs are fundamental to determining the total cost of manufacturing a product or providing a service. Direct costs are those that can be readily attributed to a specific product and are usually divided into three main categories: direct labour, direct materials, and costs of equipment or machinery used exclusively in production (Drobyazko, Pavlova, Suhak, Kulyk & Khodjimukhamedova, 2019). Easily identifiable and allocable to a specific product or service, direct costs are of paramount importance in calculating the total cost of production and determining the appropriate selling price to ensure the profitability of the company (Ayres & Stanfield, 2019).

Similarly, production costs are made up of indirect costs, which are those that are not directly related to the production of a particular product or service but are necessary for the general operation of the company; these costs are divided into two main categories: indirect production costs and indirect operating costs. Indirect production costs include expenses such as rent for the production plant and electric power used to operate machinery, among others (Maussen, Cardinaels & Hoozée, 2024).

Indirect costs are those expenses of an organization that cannot be directly allocated to a specific project but are necessary for the overall operation of the company and, therefore, also contribute to the performance of the project (Gunash, Magerramova, Yusifova, Magerramova & Samaya, 2024). These costs usually include a variety of items, such as administrative expenses, facilities maintenance, taxes, and salaries of

administrative personnel, among others. Although they are not directly related to the production or execution of a particular project, they are unavoidable costs for the operation of the organization as a whole. Therefore, it is essential to take these indirect costs into account when calculating the total cost of a project and determining its economic viability (Manosalva-Vargas, Yalta-Cañote & Pérez-Mamani, 2023).

3. METHODOLOGY

The research was quantitative since the data provided by the company were analyzed to know the trend of the answers in order to see the management of the cost system applied to the manufacturing process of aluminium polychloride. The research design was transectional or transversal since some variables were described, and their incidence on cost management was analyzed (Eslava-Zapata, Chacón-Guerrero & Parra-González, 2022).

A questionnaire was used to analyze both the production processes of the aluminium polychloride manufacturing line and the cost system applied to the production processes, and these data facilitated the determination of improvement actions for the organization (Eslava-Zapata, Chacón-Guerrero & Gonzalez-Júnior, 2019).

The sample consisted of the three administrative personnel involved in the manufacturing process of aluminium polychloride in the company CYSQUIMICA. A seventeen-item questionnaire was applied to the sample, divided into four parts: demographic data, production processes, identification of cost elements of the production processes and identification of the cost system (Table 1). Questions were asked on a five-point Likert scale, where totally disagree equals 1, disagree equals 2, indifferent equals 3, agree equals 4 and totally agree equals 5. The information was analyzed using Microsoft Office Excel.

Table 1.
Research questionnaire questions

1. DEMOGRAPHIC DATA	
1	Work experience in the company
2	Position held in the company
3	Area of expertise
2. PRODUCTION PROCESSES	

4	Do you consider that the management of production processes by stages or sequential lines allows for more efficiency in production time and product quality?
5	Do the current production processes allow for maximizing the use of resources?
6	Would you agree with the implementation of a production order costing system for the aluminium polychloride manufacturing process?
7	Would implementing a production order costing system in the company influence the production processes?
8	Is the company providing correct documentation management of the available information on production costs?

3. IDENTIFICATION OF PRODUCTION PROCESS COST ELEMENTS

9	Do you agree with the management given to the different cost elements in the production processes of aluminium polychloride?
10	To what extent do you believe that the efficient management of cost elements can impact the company's profitability?
11	Do you agree with the company's ability to strategically adjust cost elements in response to changes in the business environment?
12	Do you consider that the company has a system in place that clearly identifies the direct costs associated with the production of aluminium polychloride?
13	Do you consider that the management of costs related to labour, raw material and CIF in the manufacture of aluminium polychloride is good?
14	Do you agree with the follow-up given to the costs associated with the acquisition of raw materials and supplies?
15	Are there specific areas where the identification and management of cost elements could be improved?

4. IDENTIFICATION OF THE COST SYSTEM

16	Would you be willing to use a job order costing system as a company to manage production processes?
17	Would the implementation of a costing system improve strategic decision-making in the company and improve efficiency in the processes?

4. RESULTS:

The production processes of the aluminium polychloride manufacturing line were carried out at CYSQUIMICA

Demographic data

Table 2 shows that 66.67% of the administrative personnel have 1 to 5 years of experience, while only 33.33% have less than one year of experience.

Table 2.
Work experience in the company

Respondents	Less than 1 year	%	1-5 years	%
1	0	0,00	1	33,33
2	1	33,33	0	0,00
3	0	0,00	1	33,34
TOTAL	1	33,33	2	66,67

Regarding the position held by the personnel surveyed in the company, it was determined that 66.67% are supervisors, while 33.33% are coordinators (Table 3). This result shows that the personnel are linked to the decision-making process and the production area.

Table 3.
Position held in the company.

Respondents	Coordinator	%	Supervisor	%
1	1	33,33	0	0,00
2	0	0,00	1	33,33
3	0	0,00	1	33,34
TOTAL	0	33,33	2	66,67

Regarding the area of specialization, it was found that they work in three specific areas: production, human resources and other areas (Table 4).

Table 4.
Área de especialización

Respondents	Production	%	Human Resources	%	Other (Please specify)	%
1	1	33,33	0	0,00	0	0,00
2	0	0,00	0	0,00	1	33,34
3	0	0,00	1	33,33	0	0,00
TOTAL	1	33,33	1	33,33	1	33,34

Production processes

Regarding the perception that the managers have about the efficiency in production time and the quality

of the product manufactured by CYSQUIMICA, it was found that 66.67% stated that they agree, and 33.33% totally agree. This result reflects the importance of having an established order within the production lines in order to achieve greater efficiency and productivity (Table 5).

Table 5.
Efficiency in production time and product quality due to the management of production processes by stages or sequential lines

Respondents	Agreed (4)	%	Totally agree (5)	%
1	1	33,33	0	0,00
2	1	33,34	0	0,00
3	0	0,00	1	33,33
TOTAL	2	66,67	1	33,33

After identifying the efficiency of the company due to the work in sequential lines, we inquired about the maximization of the available resources used during the production processes developed in the company (Table 6), resulting in 66.67% agreeing. In comparison, 33.33% said they were indifferent to the subject, which implies that the company does emphasize the importance of prioritizing the resources used in production. Still, it is necessary to provide it with greater importance.

Table 6.
Maximization in the use of resources during the development of current production processes

Respondents	Indifferent (3)	%	Agreed (4)	%
1	0	0,00	1	33,33
2	0	0,00	1	33,34
3	1	33,33	0	0,00
TOTAL	1	33,33	2	66,67

Respondents were also asked about the option of implementing or reinforcing the use of a production order costing system within the company (Table 7), revealing that 66.67% totally agree with the idea of carrying out this activity, as well as 33.33% agree with it, which allows identifying that it is relevant for managers to reinforce this strategy in order to obtain significant improvements in the production area.

Table 7.

Implementation or strengthening of a production order costing system for the aluminium polychloride manufacturing process

Respondents	Agreed (4)	%	Totally agree (5)	%
1	0	0,00	1	33,33
2	1	33,33	0	0,00
3	0	0,00	1	33,34
TOTAL	1	33,33	2	66,67

Thus, it is necessary to analyze the influence generated by the cost system by production orders in the productive processes developed during the production of aluminium polychloride (Table 8), allowing us to observe that 66.67% affirm to be totally in agreement, and 33.33% agree, reason that gives for understanding that it is relevant for the company to implement this tool for the productive area.

Table 8.
Positive influence on production processes due to the implementation of a production order costing system in the company

Respondents	Agreed (4)	%	Totally agree (5)	%
1	0	0,00	1	33,33
2	1	33,33	0	0,00
3	0	0,00	1	33,34
TOTAL	1	33,33	2	66,67

In this same sense, the research needs to know the perception that the personnel have about the document management that is being carried out within the production area (Table 9), where the data established on the production costs generated in the production of aluminium polychloride are related, allowing to know that 66.67% say they agree with the management given. In comparison, 33.33% say they disagree, data that reveals that although the company does have a document management system, improvements are still required with respect to this procedure.

Table 9.
Perception in document management of available information on production costs

Respondents	Disagreement (2)	%	Agreed (4)	%
1	1	33,33	0	0,00
2	0	0,00	1	33,33
3	0	0,00	1	33,34
TOTAL	1	33,33	2	66,67

The cost system is applied to the production processes of the aluminium polychloride manufacturing line carried out at CYSQUIMICA company.

Identification of production process cost elements

In contrast to the above, it is essential to have information related to the approval that professionals give to the current management of the elements of cost, bearing in mind that the company has necessary management of raw materials, labour and CIF. However, the results showed that 33 33% totally agree with the management that is being given to these cost elements. In comparison, 66.67% disagree with it, focusing that the company requires and demands the implementation of a cost system by production orders that prioritizes the control given to them (Table 10).

Table 10.
Approval of the management of cost elements in the production process of aluminum polychloride

Respondents	Disagreement (2)	%	Totally agree (5)	%
1	1	33,33	0	0,00
2	0	0,00	1	33,33
3	1	33,34	0	0,00
TOTAL	2	66,67	1	33,33

For the research, it was relevant to inquire about the impact that the managers consider is generated in the profitability of the company due to the efficient management and handling of the cost elements in the company (Table 11), showing that by giving greater priority to the management of costs, an increase in the profitability of the company could be generated, due to the control of the resources available for the production of aluminium polychloride.

Table 11.
Perceived impact on the company's profitability through efficient management of cost elements

Respondents	Agreed (4)	%	Totally agree (5)	%
1	0	0,00	1	33,33
2	1	33,33	0	0,00
3	0	0,00	1	33,34
TOTAL	1	33,33	2	66,67

With respect to the company's capacity to face changes in the business environment (Table 12), it was observed that 100% of the respondents agreed, allowing us to know that CYSQUIMICA is able to face any variation or change in the market, with respect to its labour, raw material and CIF, demonstrating a previous knowledge on the part of the managers with respect to the management of these elements.

Table 12.
The ability of the company to strategically adjust cost elements in response to changes in the business environment

Respondents	Agreed (4)	%
1	1	33,33
2	1	33,33
3	1	33,34
TOTAL	3	100,00

Among the relevant aspects to be investigated in the research, it was necessary to ask whether the company currently has a system that identifies the direct costs linked to the production system of aluminium polychloride (Table 13) because it was relevant to know whether it already had a mechanism to distinguish the costs generated by each order, this shows that 66.67% agree, that is, they consider that such a system exists within the company. In comparison, 33.33% disagree, which shows that although the company has a basic system for analyzing cost elements, it needs to be further strengthened.

Table 13.
Existence in the company of a system that clearly identifies the direct costs associated with the production of aluminium polychloride

Respondents	Disagreement (2)	%	Agreed (4)	%
1	1	33,33	0	0,00
2	0	0,00	1	33,33
3	0	0,00	1	33,34
TOTAL	1	33,33	2	66,67

When asked about the positive or negative consideration that respondents have about the management given to costs related to labour, raw material and CIF, with respect to the manufacture of aluminium polychloride (Table 14), it was found that 66.67% is neutral on this issue. At the same time,

33,33% this data allows us to determine that, in spite of managing the costs generated in the production process, there still needs to be a better perception of this management.

Table 14.
Level of perception on the management of costs related to labour, raw material, and CIF in the manufacture of aluminium polychloride

Respondents	Indifferent (3)	%	Agreed (4)	%
1	1	33,33	0	0,00
2	1	33,34	0	0,00
3	0	0,00	1	33,33
TOTAL	2	66,67	1	33,33

When analyzing the monitoring of the costs associated with the acquisition of raw materials and supplies (Table 15), the respondents were emphatic in stating that they total 66.67% and 33.33%, respectively, an aspect that highlights the importance of correct management of resources, serving as support for the determination of financial and other variables, which, in the long and medium term, are fundamental for the organization's economy.

Table 15.
Approval of the follow-up given to the costs associated with the acquisition of raw materials and supplies

Respondents	Agreed (4)	%	Totally agree (5)	%
1	0	0,00	1	33,33
2	1	33,33	0	0,00
3	0	0,00	1	33,34
TOTAL	1	33,33	2	66,67

In contrast to the previous question, we wanted to know if the respondents consider the existence of specific areas of the organization that could be improved in the identification and management of cost elements (Table 16), to which the respondents focus to be "totally agree" in 66.67%. In comparison, 33.33% relate to the agreed approach that allows us to know the failures that are occurring in some areas of the company, highlighting the possibility of improving the shortcomings not only for these areas but for the entire company in general.

Table 16.
Consideration of specific areas where the identification and management of cost elements can be improved

Respondents	Agreed (4)	%	Totally agree (5)	%
1	0	0,00	1	33,33
2	1	33,33	0	0,00
3	0	0,00	1	33,34
TOTAL	1	33,33	2	66,67

Identification of the cost system

Within the development of the research, we sought to know the willingness of the company's managers to employ the use of a production order costing system in the development of activities in the production process of aluminum polychloride (Table 17), which yielded an affirmative response, where all respondents said they were in total agreement with the implementation of such strategy in the company.

Table 17.
Managers' willingness to use a job order costing system to manage production processes within the company

Respondents	Totally agree (5)	%
1	1	33,33
2	1	33,33
3	1	33,34
TOTAL	3	100,00

When an inquiry was made about the perception of the respondents with respect to the improvement of the strategic decision-making process, with the contribution of information (table 18), it was found that 100.00% of the respondents stated to be in total agreement, data that demonstrate the importance of this strategy for the company CYSQUIMICA, and how in turn the data obtained within the system of costs by production orders, applied to the production system, can be fundamental for the decision making of the company at a general level.

Table 18.
Perception of improvement in strategic decision-making in the company and efficiency in production processes with the implementation of a costing system

Respondents	Totally agree (5)	%
1	1	33,33
2	1	33,33
3	1	33,34
TOTAL	3	100,00

Actions to improve the cost system

In response to the challenges identified in CYSQUIMICA's current cost system, strategic actions are proposed to achieve the transformation and optimization of the financial management in the manufacturing process of aluminium polychloride. These strategic measures seek not only to improve transparency and understanding of the system but also to promote coordination between the departments involved in the production area. Through the implementation of the following actions, we aim to correct the identified deficiencies and establish a competitive position for CYSQUIMICA in the market. The actions are the following:

Simplification of the current cost system: By proposing a simplification of the current cost system, it is expected that the company will achieve financial and operational optimization, allowing it to obtain significant tangible benefits by implementing a verification of the various processes established within the proposed cost system, decision-makers will be able to quickly and accurately identify areas for improvement, resulting in an adequate and efficient allocation of resources, which will translate into profitability for the company. Likewise, with the application of responsible improvements within the implemented cost system, it will be possible to have simple and easy-to-understand primary data, achieving active participation of personnel in cost management by making the processes more accessible. These improvements will lead to more outstanding commitment on the part of human talent, contributing to an organizational culture focused on efficiency and establishing thriving bases for long-term productive operations. The development of this action will also optimize the processes executed internally, leading to facilitating the implementation of improvements with respect to the linkage of updated technologies.

Automate processes: By automating processes, the company can benefit from the savings in time spent, thanks to the linkage of a more straightforward cost structure. In addition, by simplifying the processes and

procedures used during the consignment of information in the cost elements, the company could adapt to any change presented with greater agility and pertinence, allowing CYSQUIMICA to position itself strategically to face challenges, taking advantage of market opportunities. With automation, it is expected that the personnel will reduce the time spent in management and filling out documents required for the updated knowledge of the cost elements, freeing up time which can be used in more strategic activities demanded within the organization. The integration will also facilitate the tracking of trends over time, allowing the company to anticipate and respond proactively to fluctuations in production costs.

Implementation of integrated software: With the search for improvements within the company in its productive environment, the implementation of integrated software that serves as a platform for managing and recording information proposes to bring benefits that transform cost management. In order to obtain clear and precise information, the unification of data through the use of a system that allows to provide a complete vision in real time of the production costs generated within the development of CYSQUIMICA's productive activities is exposed as an alternative of action and implementation. It will strengthen the company's capacity with respect to the timely identification of the areas where inefficiency is occurring in order to take timely actions. Improved availability and accessibility of information will significantly facilitate informed decision-making by management, allowing for positive changes in the business environment. In this same sense, the implementation of integrated software will focus on enhancing the company's operational efficiency by providing accurate information, eliminating any improper data, and better coordinating the areas involved in the production process of aluminium polychloride.

Establishment of effective communication protocols: Within the development of the strategy approach, the establishment of effective communication protocols is proposed as an alternative, allowing a significant improvement in the coordination and collaboration

between the areas and departments involved in the company's production. It is because by defining the correct channel through which information and data obtained during the manufacturing process are transmitted, any misinformation is eliminated, promoting an understanding that leads to the fulfilment of objectives and, in turn, to business growth. It not only improves operational efficiency but also strengthens the organizational culture by creating a collaborative and participative work environment. By creating effective communication protocols, benefits can be obtained internally, where the impact is generated in the internal relations of the company since having data management is relevant to the company. They are arranged in the correct way within the internal information management system, there is greater productivity, improving the processes of the production line; in the same way, benefits are obtained at an external level since having an informed and updated company allows for timely communication with both suppliers and customers, improving commercial relations and facilitating the resolution of problems in a fast and efficient manner.

Updating of formats and internal and external documentation: It is essential for the organization to continuously update the documentary formats where the information related to the cost elements is recorded, which makes it necessary to highlight the need to reorganize the existing documents used within the production area, bearing in mind that with this update it would be possible to have current data, which would serve as a basis for timely decision making. It is also essential to keep in mind that the management of clear and transparent information can be perceived positively by investor clients, generating confidence in the financial and strategic management of the company; that is to say, in every sense of the word, this action is of great benefit to the company.

5. DISCUSSION AND CONCLUSIONS

The productive processes of the aluminium polychloride manufacturing line carried out by the company CYSQUIMICA allowed us to identify that the

company is currently efficient in the development of its activities since it makes appropriate use of its resources. However, the stages immersed within the manufacturing process present shortcomings, leading to laying the foundations for future improvements in relation to operational efficiency, as well as highlighting the specific areas in which strategic attention is required, focusing on the optimization of productive practices. In the same sense, the findings establish relevant data for the company's management and administrative area since they allow for the analysis of the need to prioritize the company's document management, as the results evidenced difficulties in this aspect.

The evaluation of the cost system applied to the productive processes of the aluminium polychloride manufacturing line at CYSQUIMICA reveals both strengths and areas of opportunity. The company's ability to strategically adjust cost elements in response to changes in the business environment stands out as a strength since it demonstrates that the personnel is capable of providing timely solutions to changes. However, the need for improvements in cost management, resource maximization, and the strengthening of the production order costing system, such as tracking the costs associated with the acquisition of raw materials and supplies, is an area that requires attention. These findings point to the importance of aligning the costing system with industry best practices to ensure accurate and timely financial information.

Within the aspects found in CYSQUIMICA's current cost system, it is relevant to make improvements to why strategic actions have been proposed to transform and optimize the financial management in the aluminium polychloride manufacturing process. The actions of simplifying the cost system, implementing integrated software and establishing effective communication protocols are presented as critical solutions, addressing not only the deficiencies identified in the current system but also offering solutions in order to strengthen the company's financial management and with their use, it is expected that

these measures will boost CYSQUIMICA's competitiveness in the market.

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